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MEDICINE & HISTORY

Series V Volume XII No. 1 MARCH 1990

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MEDICINE & HISTORY

Series V Volume XII Number 1 March 1990

Acknowledgments

The publication of this issue of *Transactions & Studies of the College of Physicians of Philadelphia* is made possible through the generosity of:

The M. Louise Carpenter Gloeckner Memorial Fund

The Morris Feld Memorial Fund

Support for the exhibit on schizophrenia was generously provided in part by a grant-in-aid from:

The Sandoz Pharmaceuticals Corporation

Special thanks are due to Richard C. Josiassen, Ph.D., Program Director and Associate Professor of Psychiatry, Medical College of Pennsylvania/EPPI, who was responsible for initiating the exhibit, arranging for its funding, and providing guidance to the College staff on its contents and design.

Project Supervision: Gretchen Worden, Director, Mütter Museum, College of Physicians of Philadelphia

Exhibit materials were made available through Thomas Horrocks, Jack Eckert, and Jean Carr of the Historical Collections, College of Physicians of Philadelphia, and Gretchen Worden and Anne Bonn of the Mütter Museum, College of Physicians of Philadelphia.

Other individuals who helped prepare the exhibit are Kim Tieger, Charles Adams, Nancy Juergens, L. Cathryne Foedisch, and Diana E. Long.

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OF THE
COLLEGE OF PHYSICIANS OF PHILADELPHIA

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* * *

Erratum to the December 1989 issue of *Transactions & Studies of the College of Physicians of Philadelphia*:

Dr. William C. Frayer and Dr. Robert M. Stein were omitted from the list of members of Council of the College of Physicians of Philadelphia.

Dr. Peter J. Koblenzer was incorrectly identified as a member of Council of the College of Physicians of Philadelphia.

Correspondence

[The following letters were received in response to an invitation to San Francisco-area Fellows to contribute any observations and thoughts about the earthquake and its aftermath. Dr. Hoskins has been a Fellow of the College of Physicians since 1984, and Dr. Naughten is an Associate Fellow of the College.]

Dear Dr. Tomes:

During the past several weeks we have had the opportunity to look back on the experience of the earthquake from a slightly different point of view. When it first occurred, the initial reaction of most of us who weren't in severely damaged areas was, "Wow, a big shaker, but nothing seriously wrong." Then through the news media we rapidly learned of the section of the Bay Bridge having tumbled and of the Cypress section of I-880 having collapsed. Subsequently, reports came in about the Marina, its fire, and its devastation. Being chairman of the board of one of the local hospitals here, I was particularly concerned about the possible flood of injuries. The amazing thing is that there were so few. The health facilities were well able to handle the injuries. Indeed, it never reached catastrophic proportions.

Although San Francisco was most prominently highlighted in the news, the greatest amount of damage occurred in and around Santa Cruz, from which we have heard reports of up to 12,000 homes having been destroyed or severely damaged. In that area the problems were more severe, but thanks to the incredible organizational skills of the American Red Cross, the majority of the problems that occurred were due to property loss or major disruption of one's lifestyle rather than serious health problems.

One of the most striking things about the quake was the incredible outpouring of giving in terms of time, energy, money, and needed goods and supplies.

The psychological effects, however, continue. Now, nearly a month after the original quake, many of us still flinch as a big truck drives by and vibrates the house or the street. I personally felt that it had not bothered me particularly until one week after the initial shock there was a 4.5 aftershock. I was sitting upstairs in my home when the house began to vibrate. It was no worse than two to three dozen such shakes that I have felt since I have lived in California. Unlike those, however, and even unlike the much bigger one the previously week, this one was extremely frightening. I suspect that this was because of the concentration of information that was given to us through the media during the week right after the quake. We were all primed for the "Big One," and while we all take a

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fatalistic view of that, there is no question that when the ground starts rolling under your feet you feel totally inadequate to deal with it.

I suspect that there will be many approaches to dealing with the psychological trauma and each individual will use the best technique for himself. Many of us wish a rapid return to fatalism in which we no longer think about the quake or worry about the one that might be centered under our very home. For those of us who suffered little or no damage this will be easier than for those who lost a loved one or had major loss of property. Although the psyche can often bury such a traumatic experience, I suspect most of us who have lived through this quake will always feel different when the ground shakes. Not only does it shake the foundations of buildings, but it shakes the belief in the stability of our lives. We now understand that in a matter of moments our entire world can be turned upside down. This is something that we always realized could happen anywhere in the world, but now we know it can happen here.

Time will pass and San Francisco will continue to hustle and bustle. But I think that everybody who experienced the quake of 1989 is now well aware of how fragile the fabric of our society really is when faced with the awesome power of nature.

Very cordially,

H. Dunbar Hoskins, Jr., M.D.
November 19, 1989

Dear Dr. Tomes:

I live but a few miles from the earthquake epicenter and am very much aware of the extensive damage suffered by this area. At the present time, we have and will continue to have many truly homeless persons. The homes but a few miles West of my office were essentially destroyed. The "mountain people" had chosen a more remote lifestyle than most of us. As a result, we are still not totally aware of the extent of damage or loss of lives in these hills. We have fortunately had only 66 lives reported lost in a population of over six million. The smaller, much less publicized communities, such as Watsonville, Hollister, Santa Cruz, and Los Gatos have essentially lost their "downtowns," cruelly crippling their economies.

My youngest daughter lived in the Marina district of San Francisco. While she was not technically rendered homeless, she has lost many of her apartment possessions and her building was demolished. She is still emotionally distraught, as many are, and will be for some time. Our home structurally remained intact, [but] the interior china, crystal, and particularly my wife Ann's porcelain collection was destroyed. While upsetting to both of us, we are thankful that our family did so well.

Medically, we could not have been more fortunate. Our major and minor hospitals remained intact, with excellent staffing. Our telephone

systems, while overburdened, were also intact, and communication was maintained. While gas and water mains, as well as electrical lines, were severed, only a few fires occurred.

Historically, we have better medicine and facilities, and much of it mobile — and utilized immediately after the initial quake — than in 1906. Our construction codes saved many lives; the mortality was relatively very low, and, most of the death occurred with the freeway collapse, and its construction is being criticized.

From a practical public health standpoint, the Anhauser-Busch Company produced thousands and thousands of cans of sterile water. No single thing could have had more far reaching consequences than polluted water. This stable form was, to me, the most important thing we needed most, and received. The "mountain folks" lost the most in this area. They lost homes, water, electricity, and sewage systems — most of which are only partially restored.

We have a severe ethnic problem, compounded by local politics, wherein many of the people from Mexico are afraid to come in for care as they fear deportation. These people continue to live in tents, or less. Otitis media and gastroenteritis are primary medical problems. Some of the homeless will remain homeless for some indefinite time; shelter living and supplies are being taxed, as are the occupants. Many of the shelters are starting to close or consolidate.

Emotionally, we still have a pall of depression, apprehension, anxiety, and latent feeling of terror. My hardest hit age group were the early adolescents. Their reactions frequently paralleled their mothers'. As the lack of housing continues, and with the advent of the holiday season, we will see more feelings of frank despair expressed. Our psych colleagues are helping as much as they can with bulletins, and a recent grand rounds of the post traumatic stress syndrome — we are now considered in the coping phase. As a native of California, I have seen what we only read about in 1906. A recent gospel at my parish suggested that those who are exalted would be humbled — I'm not sure we were exalted, but we are definitely humble now.

In my years in Philadelphia, at Hahnemann, I used to chuckle at the newspaper articles describing the hurricanes in the Western papers; and the earthquakes as described by the Eastern papers. This year both were right.

In closing, I hope your Hugo homeless find permanent adequate shelter. I sincerely appreciate your expressed concern for ourselves.

Respectfully,

Robert N. Naughten, M.D.
November 14, 1989

Editorial

During his first course in neuroanatomy at the Temple University School of Medicine in the late 1930s, Frederick Murtagh beheld the brain and spinal cord, and recalls in the oral history published in this issue, "it was immediately evident to me that this was the master mechanism — the center of life, the site of all conscious and unconscious thought and the seat of the soul if there was one, and that the rest of the body existed only to serve it . . ." Murtagh's awe highlights the fact that in our culture, the brain has long been associated with the essence of what makes us human: rationality, spirituality, and personality.

Yet the medical specialties that probe the abnormal functioning of this "master organ" — beginning with psychiatry in the early nineteenth century, followed by neurology in the late nineteenth century, and neurosurgery in the 1920s and 1930s — have never enjoyed a secure or clearly defined place in the scientific world. Individuals suffering from mental and nervous diseases have always inspired special fears among the general public, and the physicians who treat them have shared in that stigma. In addition, the difficulty of separating moral and psychological causes from anatomical and biochemical defects has often caused neuroscientists to be regarded as unscientific or marginal figures within the medical profession itself.

This issue of the *Transactions & Studies of the College of Physicians of Philadelphia* is devoted to the sometimes puzzling, always fascinating, history of the neurosciences. As the articles in this issue attest, the three specialties of psychiatry, neurology, and neurosurgery have a long and rich association with Philadelphia and with the College of Physicians. Benjamin Rush, who is often called the "Father of American Psychiatry," practiced for many years at the Pennsylvania Hospital and was one of the founders of the College (although in characteristic Rush fashion, he soon quarrelled with his colleagues and quit the Fellowship). A generation later, his successor at the Pennsylvania Hospital (and a more peacefully-inclined Fellow), Thomas Story Kirkbride, became one of the "glorious thirteen" founders of the American Psychiatric Association, which held its first meeting in Philadelphia in 1844.

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But Philadelphia's most famous nineteenth-century neuroscientist was undoubtedly S. Weir Mitchell, who helped establish neurology as a separate scientific discipline in the post-Civil War period. Mitchell strongly criticized the scientific pretensions of the asylum doctors, or psychiatrists, as they came to be known in the late 1800s, and championed a new therapeutic regimen known as the "rest cure." In addition to his international reputation as a neurologist, Mitchell maintained a strong presence in Philadelphia medical politics in general, and at the College of Physicians in particular. In this issue, the distinguished historian Whitfield J. Bell, Jr., sheds a new and interesting light on Mitchell's career by exploring his long association with the College of Physicians of Philadelphia.

Building on its rich traditions of neurology and general surgery, Philadelphia emerged as one of the early centers of neurosurgery after World War I. William W. Keen, Charles H. Frazier, William Spiller, Francis C. Grant, Temple Fay, Henry Wycis, Ernest Spiegel, and other Philadelphia-area physicians helped to develop dramatic new techniques to intervene surgically in cases of trauma and disease of the brain and nervous system. In this issue, two prominent neurosurgeons and Fellows of the College, Frederick Murtagh and Henry Shenkin, reflect on the early years of neurosurgery in Philadelphia and provide a wealth of information about the personalities and circumstances that shaped the field. Historian Jack Pressman conducted these oral histories while he was a Fellow of the College's Francis Clark Wood Institute for the History of Medicine, and presents them here with an introduction based on his own extensive historical research on the twentieth-century neurosciences.

As several of the articles in this issue make clear, inter-specialty rivalry has characterized the treatment of mental and nervous diseases since the nineteenth century. David Krasner's piece balances that emphasis by highlighting the efforts of the prominent neuropsychiatrist Smith Ely Jelliffe to aid European colleagues during the 1930s. As Krasner shows, Jelliffe and other American physicians responded to the plight of their peers regardless of disciplinary affiliation. The infusion of European-trained psychiatrists and neurologists contributed to the growing sophistication of the American neurosciences after World War II.

Nancy Juergens's article on schizophrenia, which is based on an exhibit in the Mütter Museum prepared in the spring of 1989, suggests how the conception and treatment of this fascinating but frightening disease has changed over the last century in response to

the evolution of the neurosciences. Juergens's survey begins with the rise of "moral treatment" in the early nineteenth century and continues with the development of shock therapies and psychosurgery in the inter-war period. The illustrations accompanying this article highlight the interesting artifactual record of these developments available in the Mütter Museum collection.

For readers interested in pursuing further the issues addressed in this number of the *Transactions & Studies,* Thomas Horrocks and Jack Eckert have prepared a description of the Historical Collections's holdings in the history of the neurosciences, which represent one of the best such collections in the country. Twentieth-century developments are well documented by the papers of Charles Harrison Frazier, Francis C. Grant, Robert Groff, and Ernest A. Spiegel. But the core of the collection remains the papers of S. Weir Mitchell. In addition to the material it already owns, the College of Physicians is seeking to raise funds to purchase a major new collection of Mitchell papers, which includes correspondence with many famous nineteenth-century physicians as well as his unpublished autobiography, journals, and diaries. Readers interested in contributing to that effort are urged to contact Thomas Horrocks, the Associate Librarian for Historical Collections, or Jerry Condon, the Director of Institutional Advancement for the College of Physicians.

We continue in this issue of the *Transactions & Studies* to get our readers more and more involved with the pages of this journal. Fred B. Rogers, a former editor of the *Transactions & Studies,* has favored us with some of his thoughts on "Myth, Mirth, and Madness," in a new section devoted to "views from the Fellowship." In the correspondence section appear some interesting letters we received from Fellows in California about the recent earthquake. To continue this dialogue in subsequent issues, the Editor welcomes all communications and comments from the readership.

S. Weir Mitchell in the College of Physicians of Philadelphia

WHITFIELD J. BELL, JR.

"You are one of the *very* few, who take an intelligent interest in the affairs of the College," Samuel Lewis wrote S. Weir Mitchell in 1884.[1] Lewis was a good judge of such things: a Fellow of the College of Physicians since 1840, and recently elected its president, he had served on its library and publications committees, represented it as a delegate to the American Medical Association, and, by donating several thousand books over the preceding 20 years, he had laid the foundation of its incomparable medical library.

The man whom Lewis thus commended had been a member of the College for nearly 30 years and now, at 55 years of age, was at the peak of his powers and reputation as a clinician, scientific investigator, professional leader, and author of novels and poems.[2] A native of Philadelphia, where he was born on 15 February 1829, Weir Mitchell was the son of Dr. John Kearsley Mitchell, who was born in western Virginia of Scottish parents and educated at Edinburgh University — a heritage of which both father and son were especially proud. The elder Mitchell graduated from the medical school of the University of Pennsylvania and in 1841 became a professor at the Jefferson Medical College. In addition to medical

1. Lewis to Mitchell, 23 September 1884, Mitchell Correspondence (College of Physicians of Philadelphia). Except as otherwise noted, all manuscript citations hereafter are to the collections of the College of Physicians.

2. The principal published accounts of Mitchell's life, emphasizing his literary achievements, are Anna Robeson Burr, *Weir Mitchell: His Life and Letters* (New York: Duffield & Co., 1929) and Ernest Earnest, *S. Weir Mitchell, Novelist and Physician* (Philadelphia: University of Pennsylvania Press, 1950). Both make use of Mitchell's diary, autobiography, and other papers and letters, which were not available for the present essay. See also the sketch by Mitchell's younger colleague Charles K. Mills, in Howard A. Kelly and Walter C. Burrage, *American Medical Biography* (Boston: Milford House, 1971, reprint of 1928 ed.), pp. 854–857, and the sketch by Charles W. Burr and Arthur Hobson Quinn in *The Dictionary of American Biography*, Vol. 13, (New York: Charles Scribners Sons, 1934), pp. 62–65. There is also a short memoir of Mitchell with a scientific bibliography by Percival Bailey in National Academy of Science, *Biographical Memoirs*, 1958, 32:333 — 353. Much of the story of Mitchell's connection with the College is related in Whitfield J. Bell, Jr., *The College of Physicians of Philadelphia: A Bicentennial History* (Philadelphia: Science History Publications, 1987), not generally cited below.

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S. Weir Mitchell.
Courtesy of the Mütter Museum, College of Physicians of Philadelphia.

writings, Dr. Mitchell was author of a long poem entitled *Indecision, A Tale of the Far West* (1839), which, in a half-apologetic note, he cited "as evidence of the existence of literary opportunity amidst the most urgent and perplexing pursuits, and of the refreshment derived from even considerable mental exertion, directed towards subjects remotely related to the common course of a business life."[3]

Weir Mitchell attended the college of the University of Pennsylvania, but dropped out for reasons of health; he then entered Jefferson Medical College, from which he graduated in 1850 at the age of twenty-one. After a year in Paris, where he attended the lectures of Claude Bernard, Mitchell returned home, opened a practice, was elected a member of the Philadelphia Medical Society, and, inspired by his French teachers, began to devote a portion of each day to research in physiology. His first paper, "On the Various Forms of Uric Acid Crystals," was published in the *American Journal of the Medical Sciences* in 1852; two years later, he published in the same journal "Relations of the Pulse to Fixed States of Deep Inspiration or Expiration."[4] He was elected a member of the Academy of Natural Sciences of Philadelphia, to which he immediately began contributing books and specimens, and where he helped establish a Biological Department, characteristically offering a paper for its first scientific meeting.[5] Meanwhile, Mitchell had begun his study of the venom of rattlesnakes, a subject to which he said he devoted for most of two years "almost all the leisure which could be spared from the everyday exactions of my regular professional duties," and which engaged his interest for many more years.[6] Mitchell was thus a young physician of undoubted abilities for scientific research when he was elected a Fellow of the College of Physicians of Philadelphia in 1856. His nomination had been held back a year or two, he liked to say, because of prejudice against Jefferson and its graduates.[7]

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3. John K. Mitchell, *Indecision, A Tale of the Far West* (Philadelphia: Carey, 1839), p. x.

4. *American Journal of Medical Science,* 1852, *24*:121–125, 1854, *27*:387–398.

5. "Observations on the Blood Corpuscles of the Sturgeon," *Proceedings of the Academy of Natural Sciences of Philadelphia,* 1852, *10*:92; see also the appendix in the same volume for the Biological Department, pp. 2–4.

6. "Researches Upon the Venom of the Rattlesnake," *Smithsonian Contributions to Knowledge,* 1860, *12*:3.

7. "[Address following the first dinner in the new building, 1909]," Mitchell Collection, Miscellaneous Manuscripts and Letters.

Of the College at the time of his election Mitchell remembered:

> [T]he debates used to be sharp in those days. There was [George B.] Wood in the chair, most courteous of men, gently formal, and of ever-ready kindness to younger physicians; a peace-making presence when the too-positive [D. Francis] Condie was raging in debate, and Charles Meigs, with his poetic nature and talk of singular freshness, was spurred to sharp reply, and [Hugh L.] Hodge grew graver and yet more sedate, and [Franklin] Bache sat ready to drop with deliberate slowness of contradiction on the inaccurate. As I write, the visage of [William Wood] Gerhard returns to me with its grim humor. A man quick of speech and as quick to regret, an unbalanced nature, but a keen and subtile [sic] observer. There is stout [George] Fox, and the slight, delicate figure of [René] La Roche beside our great surgeon, [Joseph] Pancoast, sturdy, earnest, kindly, and original, a curious physical contrast to his colleague [Thomas D.] Mütter, small, exquisitely neat in person, and courtly in manner.[8]

Success of the usual kind was slow in coming. Without a teaching post in either of the first-ranking medical schools, Mitchell lacked one sure path to advancement and general recognition; and his achievements in scientific research, though they won him election to the National Academy of Sciences in 1865, in that day were scarcely a recommendation to patients. Moreover, his father's illness and death laid a heavy financial burden on the young man, in addition to the obligations to his own family. Nonetheless, Mitchell took part in College affairs from the beginning. Within six months of his election, he read a paper on "a remarkable case of deep and long-protracted sleep" — a foreshadowing of his future fields of interest. Appointed to the committee for the Mütter Museum in 1863, Mitchell immediately made several constructive suggestions. He proposed that the College inform hospitals and physicians of the museum's existence and purposes, and solicit gifts of appropriate materials. At his suggestion, the museum committee offered the Surgeon General's office specimens of gunshot fractures in exchange for preparations illustrating surgical conditions of any description; and thus was inaugurated a friendly and mutually beneficial ex-

8. "Commemorative Address," *Transactions of the College of Physicians of Philadelphia, Centennial Volume,* 1887, p. 330. The contents of this volume, with different pagination, were published in *Transactions of the College of Physicians of Philadelphia,* Third Series, 1887, 9:337.

change between the two institutions. In 1864, the College chose Mitchell as one of its delegates to the American Medical Association, and re-elected him in 1866, 1868, 1869, and 1871.

Meanwhile, the Civil War had offered physicians and surgeons unprecedented opportunities for study. Mitchell was quick to seize them, establishing the foundation on which his later career largely rested. As a senior acting assistant surgeon, he was in charge of a hospital at Turner's Lane in Philadelphia for soldiers suffering from nerve injuries. Out of his work there, much done in conjunction with George R. Morehouse and William W. Keen (both subsequently Fellows of the College), came a number of studies. The first, *Reflex Paralysis,* was issued as a circular by the Surgeon General's office in 1864; the second was an authoritative work on *Gunshot Wounds and Other Injuries of Nerves* (1864). "It is difficult to analyze this small volume," Mitchell wrote of the latter volume many years later:

> It almost may be said to have created a novel symptomatology for nerve injuries, adding a large number of interesting facts in regard to nutritive changes in joints, skin, nails, and hair. Here is advised the local use of massage in such cases, of injections of atropia for spastic states, and here are the first hints as to ascending neuritis. Two thousand pages of notes were taken in two years, and from these the cases of this book and of some later work were largely taken.[9]

Out of Mitchell's experience and observations at Turner's Lane came also the first of his short stories, "The Case of George Dedlow" (1866), materials for the novel *In War Time* (1884), and memories of heroism and horror which never faded.

In the two decades between the Civil War and 1884, when Lewis wrote him, Mitchell published many articles and books based on his research and practice as a neurologist and psychiatrist. Papers on malingering, phantom limb, and the antagonism of morphia and atropia came out of his wartime experiences. There were essays on causes of headache and the relation of pain to weather, on eye strain, knee jerk, nail growth, vertigo, facial tic, fear of cats, and skimmed milk as a diet in disease. Not a few of these were presented to the College of Physicians and printed in its *Transactions of the College of Physicians of Philadelphia.*

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9. *A Catalogue of the Scientific and Literary Works of S. Weir Mitchell* (privately printed, 1894).

One of Mitchell's best known publications was written out of the conviction that many physical and psychological ailments were due to overwork. In *Wear and Tear* (1873) he undertook to warn Americans of the dangers in "their excesses in work and their neglect of play."[10] The book was written in simple terms that any layman could understand; it proved so popular, going through several editions, that some of Mitchell's professional colleagues — jealous perhaps — hinted that the book might be thought self-advertising and therefore "unprofessional." Mitchell developed his ideas more fully a few years later in *Fat and Blood* (1877). This was, he wrote, "the first effort in book form to spread the full knowledge of rest treatment before the profession. This treatment was received with incredulity, and my results seriously questioned or ridiculed. It was a long while making its way in America — far longer in Europe."[11]

Mitchell's bibliography in 1894 listed 124 titles, not including notes, reviews, "numerous magazine articles," occasional verses, or the titles of a dozen novels and collections of poems. Of these latter productions he wrote, in a tone reminiscent of his father's apology for "Indecision," that they might:

> serve at least to show that it is possible for a man weighted with the gravest interests of scientific medicine to employ his imagination. Also, it may help to prove that with us, at least, the great public is indulgent when satisfied that such use of leisure has in no way lessened a man's practical usefulness.[12]

These and other contributions to science and medicine were recognized by his election to learned societies, offices, and honors. Mitchell became a member of the American Philosophical Society in 1862, and of the National Academy of Science and the American Academy of Arts and Sciences, both in 1865. He was a member of the Boston Natural History Society, the New York Academy of Medicine, and a dozen other societies, both American and foreign. Mitchell was a founder and president of the Pathological Society of Philadelphia, presided at the organizing meeting of the American Physiological Society in 1887, and was elected its president one year later. He was also chosen as president of the American Neurological

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10. Quotation in ibid., p. 18. The full citation of the book is S. Weir Mitchell, *Wear and Tear* (Philadelphia: J. B. Lippincott, 1871).

11. *A Catalogue* , p. 24.

12. Ibid., pp. 3–4.

Association. In 1875, Mitchell was selected to be a trustee of the University of Pennsylvania. As one of the managers of the new university hospital and chairman of the trustees' committee on the medical school, Mitchell exercised a strong influence on curriculum reform and research support. He also received honorary degrees from Harvard (1886), Bologna, William Harvey's alma mater (1888), and Edinburgh (1895) — the last especially cherished because of his Scottish ancestry and because so many of Philadelphia's early physicians were graduates of that university.

In 1884, Mitchell was elected vice-president of the College, and, in the customary way, was elected president in 1886. He served in the office three years and was elected to another term in 1892. Of all the institutions to which he was devoted — the Library Company of Philadelphia, Jefferson Medical College, the University of Pennsylvania, the Academy of Natural Sciences, the St. Andrew's Society, and the Franklin Inn Club — none, it may fairly be said, received more whole-hearted loyalty over the years than the College of Physicians. No one during the years of Mitchell's active association — which is to say, until his death — knew its history so well, had greater respect for its traditions, or a clearer vision of its role and future mission. Mitchell had made noteworthy contributions to the College before 1884 and made so many more in the remaining 30 years of his life that those years may properly be called, in the words of a recent history of the College, "the age of Weir Mitchell."[13] Nor did Mitchell's "age" die with him: both before and after his death in 1914, his younger colleagues, out of respect and gratitude, endeavored in various ways to perpetuate his memory. Three-quarters of a century later, Fellows who never knew him respond to the mention of his name with a gleam of recognition.

"We are not merely physicians meeting to hear and discuss facts and theories," Mitchell told Fellows in 1888. Their most important duty, he asserted, was "that of incessant watchfulness of all public interests in which questions of public health are concerned," and he mentioned particularly quarantine, sanitation, water supply, sewerage, vaccination, sale of poisons, and abattoirs.[14] When cholera threatened in 1884–1885, Mitchell had persuaded the secretary of

13. Bell, *College of Physicians*, pp. 169–172.

14. "Annual Address," *Transactions of the College of Physicians of Philadelphia*, Third Series, 1888, *10*:xxiv– xxv.

state to send Dr. Edward O. Shakespeare to Spain to study the epidemic there.

One issue of perennial concern to the College, its Fellows, the medical profession, and a large part of the public was the debate over animal experimentation. As a physician, especially a physiologist, Mitchell was repeatedly involved in this ongoing controversy. In 1871, for example, he was on a committee with Horatio C Wood and John H. Packard which sought authority from the Philadelphia city council to obtain condemned dogs for scientific purposes. Five years later, there was what Wood called "another tooth & nail fight" in the State Assembly over the use of unanesthetized animals in the classroom.[15] In 1883, Mitchell was chairman of a College committee to inquire into the American Anti-Vivisection Society, "and to take such steps as may seem to it best to guard the interests of the public and the profession."[16] The strong, often uninformed, and irrational opinions held on both sides of the question made Mitchell's task no easier. Such was the passion of the time that some Fellows wanted to discipline Dr. Packard because he attended a meeting of anti-vivisectionists.

Throughout the remainder of the century, Mitchell was called on to explain and defend the scientists' views. He was chairman of the Committee for the Protection of Scientific Research in 1886. Ten years later, his was the first of 40 signatures of distinguished American scientists and physicians to a sober statement entitled *Vivisection: a Statement in Behalf of Science*. Mitchell and his co-signers did not deny that pain was sometimes inflicted on animals, but they disputed that there was as much suffering as the anti-vivisectionists claimed. They insisted, moreover, that only the scientist should decide whether, when, and in what way animals should be used. "Otherwise, in a matter involving the interest of the community, those who know would be directed by those who do not know."[17]

To Mitchell, however, in all the years of his association with the College, the library appeared as the heart and core of the institution. On the library — on every library — he spoke with feeling and eloquence. "Books are the best tools of our business," he said

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15. Horatio C Wood to John Shaw Billings, 2 January 1876, Billings Papers, (New York Public Library).

16. College of Physicians of Philadelphia, Minutes, 7 March 1883.

17. College of Physicians, Minutes, 2 February 1876, 7 March 1883, 3 February and 7 April 1886; *Vivisection. A Statement on Behalf of Science,* (1896).

in his address commemorating the centennial of the College in 1887:

> and a great library like ours insensibly educates by tempting men with the noblest of opportunities. It is like an unfailing friend to whom we go for counsel and helpful advice, and a catalogue is its ready memory of all that our greatest knew and taught. Look around that great collection in all tongues. It is a vast presentation of the thoughts, the beliefs, the victories, the defeats of that profession which has been, as compared to any other, the purest, the most single-minded, the most simply devoted to its moral creed, the world has seen through all its changeful ages. It has its peerage, its lords of thought, its sturdy, practical commons. Yet, here is no set creed of dogmatic beliefs. We make and unmake our rulers, and time, which is more wise than Bacon, has a large vote in the matter; but while systems of medicine crumble, and doctrines have their little day, and men have been intellectually right or wrong, it is pleasant to remember that the lofty code of moral law our Greek Fathers taught us has kept through all these productive centuries an invigorating control over the lives these gathered volumes represent. Thus, side by side, the feeblest and the strongest meet. What a record of the follies and caprices of learning, of devotion, of martyrdom, of simple usefulness, of ambitious failures! Here are stately tomes unread for ages. Here is some little volume which has changed the great currents of thought, and brought hope and relief to a thousand bedsides. In yonder corner is a modest book-case, which groups the bric-a-brac of the bibliographer; the mad jests, the cranks, the queer anecdotists, the priceless incunabula, the medical poems.[18]

Mitchell not only spoke for libraries; he supported them in practical ways. He contributed books to the College collection and encouraged his friends to donate both books and family papers. Mitchell also provided money for necessary acquisitions and operations. In 1880, he donated $1,000 to establish a journal fund; in 1887, $300 to catalogue pamphlets; in 1892, $100 to complete journal files. Mitchell arranged for the College archives, other records, and old manuscripts to be transferred to the library's care. On his motion, the library's daytime hours were extended and the

18. "Commemorative Address," pp. 331–332. See also Mitchell's "Address Delivered Before the Medical and Chirurgical Faculty of Maryland," Medical and Chirurgical Faculty of Maryland, *Bulletin*, June 1909, pp. 220–227.

collection remained open during the summer. Committed to expanding the College's historical holdings, Mitchell contributed another $1,000 to buy incunabula and donated 42 ancient volumes from his own shelves. With the purchase of Dr. W. Kent Gilbert's collection of American medical autographs, Mitchell gave the College several hundred letters and documents that throw light on many aspects of medical history and scores of early American physicians. In 1895, he and Dr. Jacob M. DaCosta acquired John Morgan's Edinburgh diploma (1763); three years later, Mitchell donated to the College 17 autograph letters of Edward Jenner; and in 1905 he presented Morgan's manuscript notes of his famous visit to Rome in 1764.[19] Weir Mitchell's love of books, his long standing interest in medicine's heritage, and his commitment to the College made him one of the library's most generous contributors.

The College library, thus steadily growing, inevitably required more space. A small building fund existed in 1883, when the decision was taken to enlarge the hall by adding a third floor. Mitchell, as chairman of the building committee, raised most of the funding himself and offered to pay the interest for three years on a mortgage, if the College found it necessary to take this step to complete the construction. He then took the lead in furnishing the expanded quarters, donating a carpet for the floor, desks and chairs for the reading room, and paintings for the walls.

Mitchell's tenure at the College saw several administrative reforms. For nearly a century, it had been the practice to re-elect presidents of the College annually until they died. In 1879, when George B. Wood died after an incumbency of 31 years, the by-laws were changed to limit presidents to two re-elections. Mitchell wanted to extend the same principle to committees on finance and

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19. Among other treasures, Mitchell's library contained letters and papers of Nathan Hale, the poet Philip Frenau, and Generals Horatio Gates, Nathanael Greene, "Baron" von Steuben, and William Alexander, Lord Stirling of the Continental Army. There were many letters of George Washington, Benedict Arnold's diary at Ticonderoga in 1775, an account of the battle of *Bon Homme Richard* and *Serapis*. Mitchell owned a portrait of Washington by James Sharples, a sketch of John André, and a miniature of James Boswell by Richard Cosway. Among artifacts, in which he delighted, were Sir Francis Drake's snuff box, Walter Raleigh's copy of *Tasso*, a pair of silver cups that had been Washington's, and Edward Jenner's ink stand, which he bequeathed to the College. These were sold in 1941. William D. Morley, Inc., *Catalogue. The S. Weir Mitchell Collection of Books, Autographs, Prints, and Historical Relics . . .* (Philadelphia: privately printed, 1941). Mitchell's appreciation for history led him to the opinion that every medical school should have a professor of medical history.

entertainment, and he obtained the right of the president to attend meetings of all standing committees. But the Fellows rejected Mitchell's suggestion that presidents' terms be extended to five years, which he believed would provide the time necessary to initiate and implement desirable new policies and programs. Any change came slowly, and was always stoutly resisted. "This Quaker conservative spirit," Mitchell confided in exasperation in a private letter. "It has been fatal to our civic life."[20]

Larger quarters, better library facilities, a more active program of professional concerns, and a forward-looking leadership created a new atmosphere in the Fellowship. Facilitating these improvements were Mitchell's personality and social manner. A man of broad views and loyalties, a graduate of Jefferson and a trustee of the University of Pennsylvania, at once belonging to neither camp and to both, Mitchell was ideally qualified to soften the asperities that had marked and marred so much of the local professional life. Fully appreciating the emollient effects of good food, good wine, and good talk, Mitchell invited a variety of people to his dinners — Fellows, other physicians, lay friends, and visitors. They were memorable affairs. Oliver Wendell Holmes gratefully recalled an invitation to "Mitchell's generous board."[21] John Shaw Billings, in a bread-and-butter letter, expressed "appreciation of your dinner, considered as a work of art. I don't know much of such matters, but it was the most perfect thing of the kind I ever saw . . . Shades of Epicurus! . . ."[22] Believing that his dinners, in addition to the mere existence of the College, had played a major role in easing tensions between graduates of the two great medical schools, Mitchell assured that such social occasions should be a permanent feature of College life, instituting an entertainment fund in 1883 with a gift of $5,000 (later increased to $7,000).[23]

As president of the College and as a physician of great personal authority and reputation, Mitchell took opportunities to speak on medical and scientific matters. He was, to the end of his life, informed, forward-looking, and wise. Mitchell had, in his friend William W. Keen's words, "a yeasty mind," and enjoyed encouraging young men whose ideas seemed good. When more than 70 years old,

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20. Bell, *College of Physicians*, p. 198.

21. Oliver Wendell Holmes, "Lines on the Presentation of His Portrait to the College of Physicians," 30 April 1892.

22. Billings to Mitchell, 16 November 1874, Mitchell Correspondence.

23. "[Address Following the First Dinner. . .]."

he was made a trustee of the Carnegie Institution of Washington. Mitchell's conviction about the importance of research and science in medicine never wavered. Speaking at the dedication of the new medical laboratories building of the University of Pennsylvania in 1878, he had much to say about scientific medicine and precision:

> I might say, indeed, so far more precise are we to-day, that a world of dispute would be saved by agreeing not to quote for the solution of this problem [locality of brain disease] a single post-mortem study made more than ten years ago. There is, in fact, hardly one which is not open to hostile criticism, for want of the kind of care which to-day is exacted in all well-regulated hospitals.[24]

One of Mitchell's hopes for medicine in Philadelphia was that someone would endow and raise a research institution like the Rockefeller Institute in New York.[25]

Yet, for all he believed in science and specialization, Mitchell also thought that specialists would understand their specialties better if they had first done several years of general practice. "Believe me, we cannot safely permit any class of specialists to drift away from the general and frequent contact with the rest of us." Nor did he measure the level of medicine solely by laboratory discoveries. "The truer test of national medical progress is what the country doctor is."[26]

Many of the attitudes and policies which Weir Mitchell represented and initiated came together in the College's celebration of its centennial in 1887. The mood of the medical profession generally, as well as of the Philadelphians, was confident. Physicians had only to point to the work of Rudolf Virchow, Louis Pasteur, and Robert Koch, which had been absorbed into practice; to anesthesia and antisepsis, which had revolutionized surgery; to the Johns Hopkins and other university hospitals, which were changing medical education and the care of patients. The College marked its own progress with a scholarly program, the publication of a history of the institution, a loan exhibition of portraits, the election of Associate Fellows from around the nation, and a formal dinner at the Union League.

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24. S. Weir Mitchell, *The Dedicatory of the New Buildings Erected by the University of Pennsylvania for its Dental School and Medical Laboratories* (Philadelphia: J. B. Lippincott, 1878), p. 11.

25. "[Address Following the First Dinner . . .]."

26. S. Weir Mitchell, *The Early History of Instrumental Precision in Medicine* (Philadelphia: no publisher, 1891), pp. 4, 24.

Mitchell's commemorative address, carefully prepared, eloquent, and often moving, opened with an account of the College's founding and vignettes of its original Fellows:

> By the dim light of candles, for which I have found the modest bill, clad after the fashion of the day, some in Quaker dress and some in knee breeches, silk stockings, and low shoes with buckles, most of them carrying, I fancy, the gold-headed cane and the meditative snuff-box, some with queues or powdered wigs, a fading fashion, were John Jones, William Shippen, Jr., Adam Kuhn, Benjamin Rush, [and a dozen others.][27]

But the address was more than a tribute to the founders, more than an account of past glories. As was characteristic of him, Mitchell praised the work of present days and looked forward with confident anticipation to the future. "The pride of lineage is valueless which does not secure to the future vitality of usefulness."[28] The sentiment was repeated, lightly but no less sincerely, in the verses he read at the concluding event of the centennial:

> A grander morning floods the skies
> With higher aims, and larger light,
> Give welcome to the century new,
> And to the past a glad good-night — ![29]

"Never since I have known the College," Mitchell told the Fellows the next year with some satisfaction, "has it been more usefully active."[30]

Mitchell had more than a historian's interest in the Civil War; he had participated in it, not only at the base hospitals in Philadelphia, but also as a surgeon at Gettysburg. In his centennial commemorative address he noted that 104 Fellows of the College had served in Union Army hospitals; the count rose to 130 by 1905, as the record became more complete. As the war receded into history, Mitchell sometimes spoke and wrote about it, especially about the heroism and arduous service of the military surgeons, which were rarely mentioned in the flooding historiography of the conflict. "What has been our reward?" he demanded:

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27. "Commemorative Address," p. 333.
28. Ibid.
29. "Commemorative Verses," *Transactions of the College of Physicians of Philadelphia, Centennial Volume*, p. 382.
30. "Annual Address," p. xix.

> The great leaders in war have been promoted and universally honored. Countless statues commemorate in Washington and elsewhere the popular heroes. Statues of generals are in every town . . . Every village has its statue to the private soldier. There is not a state or national monument to a surgeon. At Gettysburg, every battery site is marked with a recording tablet; every general who fell, Union or Confederate, is remembered in bronze or marble; but what of the surgeon who died? Nothing![31]

From time to time Mitchell called attention to this omission. In 1911, he suggested to the American Medical Association that a memorial be erected to the surgeons, both Union and Confederate, who lost their lives in the war. After a visit to the battlefield of Gettysburg in the summer of 1912, he urged the Surgeon General and the Gettysburg Park Commission to mark the sites of field hospitals. On 1 January 1913 he could report to the College that he had succeeded. "Thus, for the first time, there will be a national memorial to the surgeons of the Civil War."[32] One of Mitchell's last addresses, printed after his death, was on the medical department in the Civil War. The promises of the Surgeon General and the Park Commission had done little to mollify him:

> Ah, when I think of the risks some of us have taken, the laboratory problems to be solved at daily personal peril, I am proud of the silence of our courage. Contrast with the thunder of the reputations made in our tiny Spanish War the tranquil, modest efficiency of that more deadly war which Reed and his officers conducted against yellow fever. I conclude that perhaps after all our way is the better. We wage no kindergarten wars![33]

These papers, together with others presented to the College by William W. Keen, John Shaw Billings, and two Confederate surgeons, were not only a recognition of the surgeons' services, but were also in themselves informed and authoritative historical documents.[34]

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31. S. Weir Mitchell, *The Medical Department in the Civil War* (Chicago: American Medical Association, 1914), pp. 17–18.

32. S. Weir Mitchell, "The Hospitals at Gettysburg," *Transactions of the College of Physicians of Philadelphia,* Third Series, 1913, *35*:xxix.

33. Mitchell, *The Medical Department,* p. 18.

34. "Some Personal Recollections of the Civil War," *Transactions of the College of Physicians of Philadelphia,* Third Series, 1905, *27*:87–94; Mitchell, "The Hospitals of Gettysburg," *Transactions,* p. xxxv.

Meanwhile, the College's library continued to grow; space was required for some officers and their records, and room was wanted by the professional societies, some of them offshoots of the College, which held their meetings in its hall. Mitchell raised the question of ampler quarters for the first time in 1900. He moved forward two years later when he obtained the promise of $50,000 from Andrew Carnegie on condition that an equal sum be raised by the College. Largely through Mitchell's own efforts, the goal was reached. Then began a long, often frustrating, sometimes acrimonious debate whether to enlarge or move, and if to move, where? There was no unanimity. Several times the College voted an action at one meeting, only to rescind its decision at the next. Not even the purchase of the lot on South Twenty-second Street committed the College, which once voted to sell the land. The estimated cost of the building dismayed and frightened some, but Mitchell would settle for nothing less than the best design, materials, and workmanship. He obtained another $50,000 from Carnegie and some other large gifts; still the fund was $75,000 short of the projected building cost. Finally, a few weeks after the formal opening of the new hall, Mitchell obtained the remaining balance in the form of a single gift from Philadelphia financier, Edward T. Stotesbury. "Thus ends my 7 year struggle," Mitchell wrote in his diary. "Thank God."[35]

The hall was dedicated on 10 November 1909. There were greetings and speeches by representatives of the country's great medical libraries. "It would now seem," observed Dr. Reginald H. Fitz of the Boston Medical Library, "that the future life of the College must depend largely upon the maintenance and expansion of its library."[36] Everywhere Mitchell was the center of honor and attention. The building had been largely his idea; and he had carried the plan through without ill feeling and with much good will. At a great dinner, attended by some five hundred persons, there were congratulations and toasts. Mitchell responded to "The Old College and the New."[37]

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35. Bell, *College of Physicians,* p. 213.

36. Reginald H. Fitz, "Address," *Transactions of the College of Physicians of Philadelphia,* Third Series, 1909, *31*:354.

37. "Dinner of the College of Physicians on the Occasion of the Dedication of its New Hall," *Transactions of the College of Physicians of Philadelphia,* Third Series, 1909, *31*:413.

He preferred, he said, "Our Memories and Our Hopes," and brought past, present, and future together as a man of 80 years could do:

> The men to whom I then [1856] looked up are dead. As dead as they, are the theories they fiercely debated. Of the drugs they employed we use but a few. Could these physicians return for a ghostly consultation, the practice of medicine today would be to them an amazing revelation. In fact, we are the most revolutionary of the professions. We try, condemn, decapitate the thought king of today and crown a wiser king of tomorrow, forever changing for the better.[38]

Within the lifetime of many of his hearers, Mitchell went on, medical science had put an end to pain and conquered malaria, yellow fever, and small pox. Before another century passed, "tuberculosis will have been conquered, cancer will no more demand the services of the surgeon. Prophetic dreams of today will become fulfilled realities of our many tomorrows." He turned from the past "to cheery present" and faced "with the comfort of certainty . . . the eager years to come." And lest any in his audience should be looking back at past achievements, Mitchell reminded them in the words he had used in his centennial commemorative oration 20 years before: "Pride of lineage is valueless if it does not insure for the future fertility of usefulness."[39] This day, Andrew Carnegie declared, as he followed Mitchell's toast with his own on "libraries," was the "apotheosis" of Mitchell's career. "I cannot believe that anything can be produced in Philadelphia . . . no thing, no triumph, no ceremony, no honor can be bestowed upon him that can quite equal this night, at the very apex of his life . . ."[40]

The opening of the new hall of the College of Physicians may have been the apex, or climax, of Mitchell's life, but it was by no means the final act. His energy was unabating. Mitchell published three more novels, the last in 1913 when he was eighty-four. He wrote his autobiography, completed and printed a family history, published a monograph on recently discovered letters of the physiologist William Harvey, and wrote several articles on historical and physiological subjects. Only a month before his death, at the annual dinner tendered by the president of the College to the officers and

38. Ibid., p. 414.
39. Ibid., pp. 413–417.
40. Ibid., p. 422.

council (a custom Mitchell had originated), Mitchell proposed three projects for the future: a "Roll of Honor" of all Fellows who had served in the Army, Navy, or Public Health Service in all the country's wars, including the Indian wars (note again the breadth of view that included civilian doctors of the Public Health Service with the military and the smaller wars in the west); a catalogue of incunabula; and a monthly bulletin or *compte rendu* of the sections, reviews of important new books, and historical notes on paintings, relics, and other artifacts.[41]

Honors from within and without the College continued to flow to Mitchell. At a special dinner in his honor in 1890, the Fellows had presented his portrait to the College, and in 1900, they accepted another from Mrs. Mitchell.[42] In Philadelphia each February, the newspapers now marked his birthday with feature stories and congratulatory editorials, for he had become a local institution.[43] At the dedication of the new hall in 1909, the College named the largest and handsomest room for him. Encouraged by the interest the community had shown in the institution at that time, the College inaugurated a series of lectures for the public on "Great Doctors and Achievements in Medical Research" and invited Mitchell to deliver the first lecture, on William Harvey. The lectures, three or four a year, declared the president hopefully, "serve the double purpose of keeping citizens of this community in touch with the College and diffusing a knowledge of members of our profession who have been active in the making of the history of medicine."[44] Sir William Osler was invited to speak in 1913; his response was equivocal; then war broke out, and he could not come to Philadelphia.[45] These public lectures were terminated in 1916.

Mitchell died in Philadelphia on 4 January 1914. Osler wrote a warm recollection and appreciation in the *British Medical Journal*, and under the sponsorship of several Philadelphia institutions with which he had been associated, an impressive memorial service was

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41. *S. Weir Mitchell, M. D., LL. D., F. R. S., 1829–1914. Memorial Addresses and Resolutions* (Philadelphia: privately printed, 1914), pp. 17–18.

42. Julie S. Berkowitz, *The College of Physicians of Philadelphia: Portrait Catalogue* (Philadelphia: College of Physicians of Philadelphia, 1984), pp. 127–131.

43. See, for examples, the *Philadelphia Press*, 1905, the *Philadelphia Evening Bulletin*, 1906, 1907, 1909, 1910.

44. *Transactions of the College of Physicians of Philadelphia*, Third Series, 1911, 36:3.

45. James C. Wilson to William Osler, 20 February 1913; Osler to Wilson, 25 February and 22 March 1913, Presidents' Letters.

held a few weeks later.[46] In his memory, the Weir Mitchell Oration was established at the College. Sir William was invited to deliver the first lecture, but the first oration was not delivered until 1919. By that means, besides many others, the president of the College assured the Fellows, "the memory of the greatest friend the College has had will be constantly renewed . . ."[47]

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46. *British Medical Journal,* 1914, *1*:119–121.

47. *Transactions of the College of Physicians of Philadelphia,* Third Series, 1915, *37*:12–13; George E. de Schweinitz to James C. Wilson, 6 April 1915, Presidents' Letters.

Reflections on Neurosurgery in Philadelphia: Oral Histories With Frederick Murtagh and Henry Shenkin

Introduction

Philadelphia's history and the history of neurosurgery in America are often intertwined. William W. Keen, Jr. (1837–1932), America's most prominent surgeon at the turn of the century, and a leading light of Philadelphia medicine, is credited with having performed in 1887 the first successful, complete removal of a brain tumor that was followed by long-term survival.[1] Although Keen's work would persuade many others to undertake such daring — and then almost invariably fatal — ventures, the title of "father" of American neurosurgery (originally termed neurological surgery) is universally considered to belong to the young Harvey Cushing at Johns Hopkins, the first surgeon bold enough to devote his practice to brain operations. As a result of Cushing's meticulous handiwork and technical innovations in the first decade of the twentieth century, operative mortality in this field was dramatically lowered, establishing neurological surgery as a viable specialty. Moreover, his teaching clinics laid the framework through which a new generation of highly specialized surgeons emerged.

In Cushing's story, too, the Philadelphia influence can be detected. A recent biographical account of how Cushing embarked upon his unusual career underscores the importance of an invitation in 1900 to address the College of Physicians of Philadelphia on the topic of neurological surgery, an invitation arranged by Keen, then president of the College.[2] Further addresses in Philadelphia in 1901 and 1902 brought Cushing into intimate contact with some of the leading neurologists of the day, including Charles K. Mills, William Spiller, Frances Dercum, and Charles Dana. Such a source of expertise and encouragement was not present in Baltimore.

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1. William W. Keen, "Three Successful Cases of Cerebral Surgery," *American Journal of the Medical Sciences*, 1888, 96:329 — 357; and Bryce Weir, "The American Centennial of Brain Tumor Surgery," *Neurosurgery*, 1988, 22:986–993.

2. Harvey Cushing, "A Method of Total Extirpation of the Gasserian Ganglion for Trigeminal Neuralgia," *Transactions of the College of Physicians of Philadelphia*, 1900, 22:171–194.

Transactions & Studies of the College of Physicians of Philadelphia Ser. 5, Vol. 12, No. 1 (1990); 27-48
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Indeed, it is not surprising that the impetus and intellectual base for the development of neurological surgery should arise in Philadelphia, arguably the professional center of American neurology. It was no accident, for example, that Keen's famous operation occurred in the presence of S. Weir Mitchell and other prominent neurologists. Furthermore, as of 1908 or so, Cushing and Charles H. Frazier (1870–1936), professor of surgery at the University of Pennsylvania, are considered to have been the only two surgeons in the United States with extensive neurological practices; Frazier's own pioneering role in the development of this field has been directly linked to his collaboration with the neurologists Charles K. Mills and William Spiller.[3] Frazier inaugurated a dynasty of neurosurgical excellence at the University of Pennsylvania, being succeeded, in turn, by locally trained students Francis Grant (1891–1967), Robert Groff (1903–1975), and Frederick Murtagh (1917–).

Neurosurgery emerged as a definite specialty in the period between World War I and World War II. Whereas in 1899, only two brain tumors were operated upon at Johns Hopkins Hospital, in 1931, Cushing delivered a famous paper summarizing the results of two thousand such cases. The advance of neurosurgery was dependent upon an interconnected series of technical innovations, which included blood transfusions that might sustain life during long, complex operations; the use of clips and then electrocautery to stem bleeding, allowing deeper penetrations than otherwise possible; and the development of diagnostic techniques such as ventriculography (an x-ray of the head following the removal of cerebrospinal fluid from the cerebral ventricles and its replacement with another medium, such as air, for contrast), and afterwards angiography (an x-ray of the vascular system after a contrast medium has been injected into the arterial blood system), which often yielded positive evidence of brain pathology.

In addition to brain tumors, neurosurgical practice expanded to include various forms of intractable pain, back problems, head wounds from the increasing hazards of urbanized life, and even psychiatry, where the procedure of lobotomy (the surgical incision

3. D. J. Canale, "William Osler and 'The Special Field of Neurological Surgery,' " *Journal of Neurosurgery,* 1989, 70:759 — 766; Ernest Sachs, *Fifty Years of Neurosurgery, A Personal Story* (New York: Vantage, 1958); and Charles H. Frazier, "The Achievements and Limitations of Neurologic Surgery," *Archives of Surgery,* 1921, 3:543–559.

first successful treatment for chronic schizophrenia.[4] Professional milestones include the founding of the Society of Neurological Surgeons in 1920, the Harvey Cushing Society in 1931, and in 1940 the American Board of Neurological Surgery and *Journal of Neurosurgery.* The exigencies of war forced unexpected responsibilities on a generation of young physicians, and as with other specialties, World War II led to neurosurgery's dramatic expansion.

The following interviews with Frederick Murtagh and Henry Shenkin reveal some of the change that has taken place in neurosurgical practice between 1940 and today. Although by all sociological measures the field was a mature specialty in the 1940s, we are apt to forget the immense challenges, both personal and technical, that these practitioners faced. In the 1940s, the operator remained his own diagnostician, and was sobered by the knowledge that often even the most astute of clinical acumen was unable to correctly localize a suspected tumor — an error revealed only after the dangerous operation was underway. Moreover, to be a neurosurgeon in the mid-twentieth century was to limit your practice to exotic ailments of uncertain supply; the beginning practitioner confronted the harsh reality that joining this most elite of medical specialties almost required a prior membership in an equally elite social stratum. For the neurosurgeon, the M.D. degree was no sure sign of financial security.

Some continuities also pertain. Then, as now, to invade the human brain was to venture into one of the last great unmapped frontiers in science. Every brain operation is at root a biological experiment; the pioneers of neurosurgery assumed that neurological and neurophysiological investigation was a primary responsibility — and motivation — of their work. Neurosurgery flourished in America as in no other country; for nowhere else could one find the qualities of a bold, practical surgeon, and that of a learned scientist, combined so naturally.[5]

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4. Ernest Sachs, "The Most Important Steps in the Development of Neurological Surgery," *Yale Journal of Biology and Medicine,* 1955–1956, *28*:444–450; and Jack D. Pressman, "Sufficient Promise: John F. Fulton and the Origins of Psychosurgery," *Bulletin of the History of Medicine,* 1988, 62:1 — 22.

5. The story of neurosurgery remains largely unmined by recent historians. For further information, readers may wish to look at A. Earl Walker, *A History of Neurological Surgery* (London: Baillière, 1951); Gilbert Horrax, *Neurosurgery: An Historical Sketch* (Springfield, IL: Charles C. Thomas, 1952); John E. Scarff, "Fifty Years of Neurosurgery, 1905–1955," *International Abstracts of Surgery,* 1955, *101*:417–513; David Reeves, "The Development of Neurological Surgery in the United States," *International Surgery,* 1969, *52*:463–467; Robert Wilkins, ed., *His-*

Interview with Dr. Fred Murtagh

The following interview with Dr. Frederick Murtagh was conducted by Jack D. Pressman on 30 October 1987. The transcript has been edited to improve its accuracy and clarity. Dr. Murtagh is Professor Emeritus of Neurosurgery, University of Pennsylvania Medical School. He has been a Fellow of the College of Physicians of Philadelphia since 1955.

INTERVIEWER: In terms of your peers, your cohorts in medical school, what made you different in wanting to go into neurosurgery? Why was a fire lit in you and not in others? What were the others interested in and how did you see yourself in comparison?

MURTAGH: I found myself little different from my 125 classmates at Temple University Medical School in the fall of 1939. Many of them were a lot smarter than I, often with generations of medical background. I, on the other hand, was a first generation upstart and felt somewhat at a disadvantage, especially since most of my family, with the exception of my mother and my future father-in-law Dr. Samuel Shaner, felt that I did not have "the right stuff" to become a physician. Fortunately, there were several in the class who were not quite as smart or who did not work as hard as I did, or else I would never have made it.

It was Dr. William Pritchard who lit the fire that sent me into neurosurgery. He was the professor of anatomy who presented the course in neuroanatomy at the end of the first year. This came along after gross anatomy, and after we had been through the entire rest of the body. The most dynamic and exacting teacher I ever knew, he presented the magnificent structure of the brain and spinal cord in such a vivid spectacle that it was immediately evident to me that this was the master mechanism — the center of life, the site of all conscious and unconscious thought and the seat of the soul if there was one — and that the rest of the body existed only to serve it, to carry it about, nourish it, constantly feed it information, carry out its bidding and reproduce it. The individual did not die until the brain died. Encased within the confines of the skull, where it could be neither seen nor heard, very little was known about its function and this to me was the frontier for the acquisition of knowledge. The anatomic complexities of the central nervous system were intimidating to most students who were very quickly turned off.

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tory of the American Association of Neurological Surgeons Founded in 1931 as the Harvey Cushing Society: 1931– 1981 (Chicago: The American Association of Neurological Surgeons, 1981); and Paul Bucy, ed., *Neurosurgical Giants: Feet of Clay and Iron* (New York: Elsevier, 1985).

Fortunately for the profession, my classmates' interests covered all other aspects of medicine. I know of only one other person out of the class who entered a neurologic field.

INTERVIEWER: Were you also interested in becoming a surgeon?

MURTAGH: Yes. I was interested in becoming a surgeon because it seemed to me to be the most positive and direct approach to a problem. With that kind of personality, I would not be able to sit and cogitate, read the literature, and pontificate while the patient slipped away if I could get my hands on something and get to the core of the predicament in short order. The prospect of combining a surgical career with neurology seemed very attractive.

INTERVIEWER: Tell me about your experience in the military, how it affected . . . your selection of problems.

MURTAGH: The military experience was a maturing one. Easily the most exciting and broadening years of my life were as a Medical Officer in the United States Navy. [Following graduation from medical school in March, 1943], my internship was at the Naval Hospital in Philadelphia, staffed at that time by outstanding clinicians from major medical centers around the country who were Navy Reserve Officers. There was a short stint as physician to the Naval Training Center at the University of Minnesota, followed by assignment to the Amphibious Forces and then to the Pacific as Medical Officer on a ship for two years.

INTERVIEWER: What did World War II do for neurosurgery as a profession? There was a great burgeoning across all specialties but what in particular about neurosurgery?

MURTAGH: Well, I think World War II focused the need for greater surgical attention to the nervous system, particularly trauma, and was responsible for the ultimate identification of the neurosurgeon. You must know that the pioneers in neurosurgery were for the most part general surgeons who gravitated to concentrating on surgical disorders of the brain. In 1941 when we actively entered the conflict there were very few surgeons who could be called neurosurgeons, probably less than three hundred. When I started my internship at the Naval Hospital in Philadelphia I was first assigned to the psychiatric service. My Ward Medical Officer was Dr. Axel Olson, one of the few young certified neurosurgeons, but he was an administrative anomaly to Navy Medicine. They didn't know where to put him, so in their wisdom, since neurosurgery had something to do with the brain, they made him chief of Psychiatry — typical. At least they did finally recognize him as a surgeon and assigned him to the general surgical service. Since there were so few neurosurgeons, they were kept in base hospitals, and there was no one in the field who could provide more than primitive management to the patient with acute head injuries.

Later, while I was in North China aching to go home, I wrote a letter to Ross McIntire, then surgeon general of the Navy, suggesting that the Navy would have need for neurosurgeons in the future and proposing that interested Medical Officers be sent to civilian training programs in neurosurgery. The Admiral wrote back saying he thought this would be a fine idea and when I returned from sea duty I could look forward to such an assignment. This never happened and after a fantastic year at the Philadelphia Naval Hospital as assistant to Dr. Robert Brown, the legendary Eliason Resident of Surgery at the University of Pennsylvania, who later became surgeon general of the Navy, I resigned my commission to seek training in neurosurgery on my own. By this time nearly all training programs in all specialties were filled to overflowing.

I went back to Temple Medical School to see if I could get lined up there with Dr. Temple Fay, chairman of Neurosurgery, only to find that he had left the university and had his own clinic in Chestnut Hill. Dr. William Parkinson, dean of the medical school and my mentor, could not understand why anyone in his right mind would want to go into neurosurgery, but he suggested I go up and speak with Dr. Fay, which I did, and spent 16 months with him. He was the most fantastic technical surgeon I have ever known and I learned all the basic principles of neurosurgery from him.

INTERVIEWER: Could you explain your remark, "that nobody in their right mind would go into neurosurgery?"

MURTAGH: Dr. Parkinson was a surgeon himself, and like most others at that time he could not understand why anyone would want to devote a career to such an unrewarding specialty. It was the general perception at that time that all patients with brain tumors or hemorrhages were doomed to die and surgical intervention only hastened that event, or if they did survive they were rendered terribly incapacitated. In medical circles neurosurgeons were looked upon as being a little bit crazy, and their image was that of wild eyed creatures in white coats running around day and night boring holes in people's heads and leaving behind them a trail of devastated patients. The neurosurgical ward was known as "The Garden" because of the high percentage of vegetating patients it housed. Fortunately all this is history; the past 40 years have seen tremendous advances in all of medicine. Neurosurgeons today are for the most part sophisticated neuroscientists as well as clinicians.

INTERVIEWER: Let's return to the beginning of your [career] internship.

MURTAGH: After leaving the Navy in 1947, and after my preceptorship with Dr. Temple Fay, I returned to Temple in September of 1948 to be the first post-war resident in neurosurgery, working with Dr. Michael Scott and Dr. Henry Wycis in neurosurgery, Dr. Ernst Spiegel in neurophysiology, and Dr. Sherman Gilpin in neurology. I was certified by the American

Board of Neurological Surgeons in May of 1953, and having achieved this distinction decided to forego taking the certifying examinations in Psychiatry and Neurology for which I was scheduled in June of 1953. I stayed on the faculty at Temple and in 1964 became professor of neurosurgery and chairman of the Division of Clinical Neurosciences, comprising the Departments of Neurology, Neurosurgery, Ophthalmology, and Otorhinology and then chairman of the Department of Neurosurgery in 1971.

Around this time I got diverted into various administrative positions for which I was not prepared and which were taking me away from neurosurgery. In 1974 Tom Langfitt, Chairman of Neurosurgery at the University of Pennsylvania, called me and asked me to join him as co-chairman of neurosurgery and neurosurgeon-in-chief of the Hospital, so he could take the job of Vice President. I accepted his offer with the understanding that I would do clinical neurosurgery only. Beginning on 1 January 1975 we enjoyed more than a decade of a mutually beneficial relationship.

INTERVIEWER: How would you say your career is distinguished from your cohorts who also went into neurosurgery?

MURTAGH: I don't think my career differed materially from my cohorts who went into neurosurgery in those first few years after World War II. Neurosurgery was still a very young specialty with its roots in Europe, particularly Britain and Germany. Dr. Harvey Cushing of Johns Hopkins and Harvard is generally considered to be the patriarch of neurosurgery in America. One also thinks of Charles Harrison Frazier of Penn and Walter Dandy of Johns Hopkins, along with a handful of other distinguished surgeons who bravely began their work in the first three decades of this century and laid the foundation of the specialty. Their students built on their mentors' work and expanded the specialty into many of the major medical centers.

Here at the University of Pennsylvania, Frazier pioneered neurosurgery at the same time Cushing was doing his work at Harvard. They were professional rivals but said to be good friends. Frazier, like most of the early neurosurgeons, was a general surgeon who acquired an interest in neurology. Supported by the superb neurology group at Penn, particularly Dr. William Spiller, he developed many of the original neurosurgical techniques. He was also dean of the medical school, the John Rhea Barton Professor of Surgery, and a trustee of the University. His trainees were few, but became leaders in the neurosurgical world. His trainee Dr. Francis Grant succeeded him as chairman of Neurosurgery in 1936. Temple Fay, another trainee, moved to Temple in 1929 and established the first full Department of Neurology and Neurosurgery.

By this time it was evident that in order to be a good neurosurgeon one also had to be a good neurologist. This small group of pioneers established the American Board of Neurological Surgery in 1940, and neurosur-

gery was fully established as a recognized specialty. Still, there was only a handful of neurosurgeons, and neurosurgery was done only in the large academic medical centers. In the few years following World War II, an unprecedented number of young doctors went into neurosurgery, maybe as many as a hundred, and became what I call the second generation neurosurgeons responsible for the quantum leap the specialty has taken in the past 40 years. Many of them stayed in academic medicine and expanded neurosurgery into even more medical centers. Many others moved out of the universities and established clinics and services that brought neurosurgery to almost every community.

INTERVIEWER: What did these hospitals do beforehand without neurosurgery? How were these cases handled?

MURTAGH: Well, to begin with, not many patients were diagnosed as having problems of a neurosurgical nature. Most neurological conditions were considered to be due to things like epilepsy, stroke, psychoneurosis, "brain fever," and a variety of other medical problems and were treated symptomatically. The average practitioner was unaware that there might be a surgically treatable cause for these problems. As a matter of fact, so were the neurologists and neurosurgeons at that time. Head injury was usually obvious but brain tumors were considered to be so rare that their presence was not considered until the process was far advanced and the patient severely paralyzed or in or near coma and death with increased intracranial pressure. These patients were sent into the university centers in desperation, knowing that the morbidity and mortality was very high even under the best of circumstances. As a resident in such a university center in the late 1940s, neurosurgery consisted largely of a steady stream of patients transferred in from outlying hospitals at all hours of the day and night, paralysed, semi-conscious, or comatose with obvious severe head injuries or suspected brain tumors or subdural hematomas. Diagnosis of these problems was extremely difficult and depended almost entirely on clinical evaluation — a good history, which was often lacking, and a careful neurologic examination to locate the site of the problem. A history or external evidence of trauma was a bonus. An x-ray of the skull might show a fracture line, an area of erosion of the bone at the site of a tumor, intracranial calcifications, or the shift of a calcified gland in the middle of the brain might lend a clue. If there was time, air might be injected into the cavities of the brain and x-rays might demonstrate distortion of the normal structures to suggest a mass in the brain. That was the extent of our diagnostic capability. All in all, we were lucky to get on the correct side of the head. Even then there was little we could do except make multiple holes in the skull to let out blood, or widely open the skull and

remove blood clots or tumors or what ever could be found. A lot of people died.

INTERVIEWER: To shift the topic a little, can you talk about the relation between neurosurgery and other specialties, like neurology or psychiatry, in the 1940s? In the Philadelphia area?

MURTAGH: Dr. Charles K. Mills, and his associate Dr. Spiller stimulated Frazier's interest in neurology by suggesting surgical procedures for treatment of neurologic problems such as tic douloureux, and spinal cordotomy for chronic pain below the waist. This highly productive association between neurologist and surgeon was responsible for the development of the specialty of neurosurgery in this area. Discord crept into this relationship later in the 1940s and spilled over into the 1950s, due largely to differences between forceful individual personalities. When neurosurgeons, now well trained in neurology, began to make their own neurologic diagnoses, a few of the neurologists of that period considered this an intrusion on their territory. Their vehement accusations were met with equally fierce verbal counterattacks and the war was on for awhile. Fortunately, with the demise of that generation, such rivalry exists only in isolated instances among individuals. Today neurologists and neurosurgeons work well together, with only the natural philosophical ideology of the medical mind versus the surgical mind possibly separating them.

INTERVIEWER: Can you give me a specific example of this rivalry in the early part of your career?

MURTAGH: Well, let's see. While this all began as confrontation between strong minded highly vocal individuals, the attitudes thus created adversely influenced inter-specialty relationships for as long as two decades. They are all dead now so I guess it's all right to talk about it without getting into personalities. I don't think you will find it described anywhere.

Neurosurgeons were characterized as mere mechanics — carpenters or more affectionately woodpecker surgeons — because they were always drilling holes in people's heads. They were believed to be of rather dull intellect, certainly not capable of comprehending the intricacies of the brain and therefore not good candidates to make a neurological diagnosis or engage in basic research. Rather they should confine their investigations to sharpening their tools and inventing new ones. Neurologists, in turn, were portrayed as illusionists in pursuit of complex clinical syndromes to which they attached the names of three Frenchmen but were incapable of providing treatment for any of their diseases. As models of inaction, they pontificated and spouted the literature while their patients succumbed to increased intracranial pressure which they neither recognized nor understood. An unpleasant but fortunately short lived open encounter between powerful egos which impressed the young minds around them and took a long time to overcome.

The best example of the relationship was at Philadelphia General Hospital (P.G.H.). The neurology service there was one of the finest in the world, a living textbook of neurology. In the late 1940s, the inpatient section was still housed in an old clapboard barracks-like building dating back to Civil War days, situated on the spot now occupied by Children's Hospital. It was known as the Osler Building. It was here that Sir William Osler did most of his teaching and where a succession of giants in neurology — William Spiller, Charles K. Mills, Frances Dercum, Wharton Sinkler and a host of others — held their teaching conferences. My recollection is that there were two floors — the first floor a ward of about 30 beds for neurology patients and on the second floor a similar number of beds for the urology service. The entire structure was preserved in generations of urine which was quite evident as soon as you walked into the place. The beds were unpainted wooden structures supported by four 4x4 posts connected with flat boards six feet long and two feet wide, the "springs" were latticed hemp ropes and I suspect the mattresses were stuffed with straw.

Shortly thereafter, a magnificent new building was constructed at the other end of the P.G.H. complex known as the Mills Building, specifically for the neurology patients. This permitted the housing of a greater number of patients and one could find here a living example of almost every neurological disorder, no matter how rare. The Friday afternoon conferences, presided over at that time by Drs. Abe Ornsteen and Joe Yoskin, two of the finest people it has been my pleasure to know, were outstanding learning experiences and heavily attended by neurologists and neurosurgeons from the entire area and afar.

The neurosurgeons functioned at the whim of the neurologists. The usual scenario was the patient who had been admitted during the week, initially worked up by the interns but not seen by an attending neurologist until they made rounds on Friday morning. After evaluating the patient, they would decide that this subconscious patient might have a subdural hematoma and would instruct the intern to call the neurosurgeons to come down and put burr holes in his head. We would get the call, almost predictably at 4:40 Friday afternoon, not asking us to come down and evaluate the patient but telling us to come down a put burr holes in his head. So there we were late on Friday afternoon with a desperately ill patient about whom we knew little and with most backup people in x-ray and the operating room already gone home, and there was little we could do but put burr holes in his head or do a large decompression. Things were tough at times.

Later, when we were able to have residents at P.G.H., cases were picked up earlier, and usually at night, after supper, if the residents wanted to do some surgery they could always wander through the medical or psychiatric

wards and find a patient with a subdural hematoma or meningioma that needed operating.

INTERVIEWER: Could you talk more about what it was like to have to guess on what side of the brain the problem was?

MURTAGH: I wouldn't say it was exactly "guessing," but almost so by today's standards. It was a carefully considered clinical decision based on the accumulation of a number of personal observations of the patient's condition. Often these decisions had to be made in a matter of minutes or even seconds.

Confronted with a patient suspected of having an intracranial problem, and in various stages of impairment of consciousness, ranging from awake and responsive to deeply comatose, step one is to determine as accurately as possible the exact location in the brain, that is, left side, right side, front, back, temporal, center, or suboccipital. At that time the only way this could be done was by careful clinical evaluation — a good history, hoping to uncover a trauma, seizure pattern, variations in behavior, personality changes, impaired cognition, or other recent changes in the patient. Then a careful neurological examination looking for motor weaknesses, reflex changes, pathological reflexes, sensory deficits, impaired speech, hearing or visual deficits, and impairment of coordination. Finally, an assessment of the degree of intracranial pressure made by observed level of consciousness, alterations in blood pressure, pulse, and respirations or by the observation of swelling of the optic nerves with the ophthalmoscope. Putting together every small bit of information thus gained and coming up with a mental picture that said the tumor is "here" is a highly satisfying academic exercise that beats any Holmesian saga ever envisioned by Sir Arthur Conan Doyle, particularly if we were correct. As I have said before, information was often so lacking that we considered ourselves lucky if we got on the correct side of the head, let alone where.

All this cerebral exercise is gone now. It is all too easy. A CAT scan or MRI in a few minutes tells the whole story: precise location and identification of the lesion permitting a well planned direct surgical approach to the problem. The same goes for postoperative management — no more agonizing nights at the bedside with a postoperative patient in trouble, wondering, is it bleeding, is it swelling, is it hydrocephalus, should I go back in or should I ride it out? The CAT scan tells all in seconds — no need to think. Absolutely fantastic for the patients. Never before have we been able to do so much for people, but academically sad for the young men and women in the field deprived of the sheer excitement and satisfaction of solving a problem by their own wits and clinical expertise, and for the

diminution of their academic knowledge, as recent reports of wide spread falling off of board scores shows.

INTERVIEWER: What about relations with psychiatry?

MURTAGH: Relations with psychiatrists have not been too close. They have tended to remain somewhat at a distance from organic diseases of the brain. This applies to neurology as well even though they are certified by the same board. The closest affiliations I can recall were in the late 1940s and 1950s when psychosurgery was at its height. Probably the best known team was that of Walter Freeman, psychiatrist, and James Watts, neurosurgeon, at George Washington University. I can still see the movies of Jim Watts doing a prefrontal lobotomy with Walter Freeman standing behind him directing him how to make the cuts. Watts apparently stood this as long as he could and then dissolved the relationship. That was when Freeman developed his ice-pick lobotomies.

My relationship with psychiatrists has always been quite cordial and many of them have sent me patients, and I have also operated on several.

INTERVIEWER: I know that Temple Fay was involved with psychosurgery. Did you see any of that?

MURTAGH: Yes, I saw a lot of psychosurgery but it was not Fay's work. He was not involved with psychosurgery. It was the neurophysiologist Ernst Spiegel and the neurosurgeon Henry Wycis at Temple who collaborated in the adaptation of the Horsley Clark stereotactic instrument, designed for work on animals, to the human skull and brain for the purpose of making microscopic lesions in the deep basal ganglia for the treatment of motion disorders, and later in the dorsal median nucleus of the thalamus for the treatment of psychoses. They had reported their first cases in 1947, and as a resident, beginning in 1948, I participated in much of this original work.

INTERVIEWER: Could you describe the types of relations between the University of Pennsylvania, Temple University, and Thomas Jefferson University? What was the community like here in neurosurgery? How did they differ?

MURTAGH: The nucleus of neurosurgery here in the Philadelphia area, as with the rest of the country, was at the University of Pennsylvania, pioneered by Charles H. Frazier who was succeeded by his student, Francis Grant, who was succeeded by his student, Robert Groff. Temple Fay, also trained by Frazier at Penn, went to Temple and established the Department of Neurosurgery which was a prototype of neurosurgery at Penn. He was succeeded by Michael Scott. Henry Wycis did his work with Spiegel at that time. Rudolph Jaeger, trained by Walter Dandy, came to Jefferson in the early 1950s and brought the Dandy School of neurosurgery to this area. Later Axel Olson, trained by Oldberg in Chicago, started neurosurgical services at Hahnemann Medical College. Actually, there was very little

interaction between these neurosurgeons; they rarely got to see each other simply because there was no forum for their meeting. Conscious of this need, Jaeger, Groff, Scott, and Olson got together in 1959 to form the Philadelphia Neurosurgical Society. Of course they needed someone to do the leg work so, as the young buck on the scene, I got the job as secretary. Several good meetings were held for the neurosurgeons in the Philadelphia area but this was such a small group that the scope of the society was broadened to include all of Pennsylvania, New Jersey, New York, Delaware, and Maryland as the mid-Atlantic Neurosurgical Society.

INTERVIEWER: How was Philadelphia viewed on the national scene? When people thought of Philadelphia neurosurgery, what did they think of?

MURTAGH: Philadelphia was always looked upon as one of the points of origin of neurosurgery along with Boston and Baltimore. By the 1940s, there were a number of other active centers in New York, Chicago, Memphis, St.Louis, San Francisco, and Montreal, to name a few. But when people thought of neurosurgery they did not think of the geographic area or even of the institution; they thought of people. When they thought of Philadelphia, they thought of Frazier and Grant; they thought of good clinical neurosurgery, particularly for brain tumors and for control of pain.

INTERVIEWER: I'd like to give you a chance to reflect on what contributions you are most proud of that you have made to the field. Or your own satisfactions that you've gotten.

MURTAGH: Well, I guess that depends somewhat on your definition of "contribution." If you are thinking of big time scientific breakthroughs or earth-shattering discoveries, there was none of that. It was my good fortune, however, to be on the cutting edge of every advancement in neurosurgery since 1947, and to be in a position where I could be a part of and participate in the unfolding of each of these innovations.

There was the early championing of placing the patient in the sitting position for posterior fossa surgery and a career-long interest in this type of surgery, especially for acoustic neuromas; working with Herbert Stauffer on the first fractional air studies and pantopaque myelography; the trying times of developing the techniques for direct percutaneous puncture of the carotid artery for the injection of contrast material for cerebral angiography; and working with Edward Chamberlain to design and build the first and only biplane stereoscopic angiographic device, affectionately known as the "Whompus" because the noise it made when activated was whomp-whomp-whomp, as it took 12 x-rays of the head in both the AP and lateral projections, each film stereoscopic with the one in front and the one behind, at split second intervals in the 10 seconds it took the injected contrast material to traverse the cerebral circulation. Hydrocephalus was a problem, and there were many fruitless operations before current hardware was

devised, and then the fun of modifying that hardware to our own satisfaction; also the development of the lumbar peritoneal shunt for communicating hydrocephalus.

It was gratifying to work with Roy Krumperman to provide selective epidural block anesthesia for spinalthalamic tractotomy with the patient awake, and to work with him on planning intraoperative methods of controlling brain volume, regulating blood pressure, and maintaining cerebral metabolism during surgery on aneurysms and tumors. There was that first look through the operating microscope into a whole new anatomic world which gave us the ability to meticulously dissect out tumors and aneurysms. The greatest exhilaration has been in the past 15 years as the imaging techniques — CAT scans and the MRI — have changed our world completely.

Not much of this personal involvement is documentable in the medical literature. I guess I always had the peculiar notion that I never had to prove myself to anyone other than myself, and I preferred to do this in the operating room and at the bedside rather than on paper.

My satisfaction now comes with the cards and letters I receive, mostly at Christmas time, from former patients, bringing me up to date on their lives and thanking me for them, or from events such as when a handsome young woman with two youngsters in tow came up to me in a supermarket, planted a big kiss on my cheek, and said, "I know you don't remember me Dr. Murtagh, but I remember you. You took my brain tumor out when I was seven years old and look what I've got now."

Interview with Dr. Henry Shenkin

The following interview with Dr. Henry Shenkin was conducted by Jack D. Pressman on 7 December 1985. The transcript has been edited to improve its accuracy and clarity. Dr. Henry Shenkin recently retired as director of neurosurgery, Episcopal Hospital, and professor and director, Division of Neurosurgery, Medical College of Pennsylvania. He has been a Fellow of the College of Physicians of Philadelphia since 1955.

INTERVIEWER: How did you enter neurosurgery?

SHENKIN: My father, who was a physician, developed a brain abscess from an infected mastoid in 1933 and was cared for at the Hospital of the University of Pennsylvania (H.U.P.). At that time I was 17 years old and an undergraduate at the University of Pennsylvania. Our cousin, Katherine Guest, later Sturgis, was secretary to Dr. Ravdin in the Harrison Department of Surgical Research and was looking after my father's interests. She asked Dr. Francis Grant, the attending neurosurgeon, to have the neurologist, Dr. Bernard Alpers, see my father. Dr. Alpers was also director

of the surgical neuropathological laboratory in the Department of Neurosurgery at H.U.P. My father took a long time to die and we became well acquainted with Dr. Alpers and, no doubt instigated by Kath, he invited me to work the following summer in his other neuropathological laboratory at the Institute of the Pennsylvania Hospital, on 49th Street. I learned to be an histological technician: preparing specimens, making slides, staining, and so on. Subsequent summers I worked in his laboratory at the University Hospital, and when I got to medical school, I would accompany Dr. Alpers on his rounds, three times weekly, at the Philadelphia General Hospital, where he was a chief of neurology. After I was accomplished enough as a neuropathologist I was asked, informally, to look after his hospital laboratory when he would take his summer vacation. This gave me the opportunity to see a good bit of, and become friendly with, Dr. Grant, who was by now professor of neurosurgery, having succeeded Dr. Charles H. Frazier, with whom I had also become acquainted, before he died in 1936. Dr. Grant would come frequently to the laboratory inquiring about his specimens and I often was the one there — in Dr. Alpers' absence.

I graduated from Jefferson Medical College in 1939. In the summer of 1938 or 1939 — I can't remember which — Dr. Grant came to me and said, "Would you like to be a neurosurgeon?" And I said to him, "Well I hadn't thought about that. I was planning to be a neurologist like Dr. Alpers." For a medical student I was fairly well prepared in the neurological sciences and I thought I had a head start. He said to me, "Well, are you prepared to do psychiatry?" I said, "No, I really didn't take to psychiatry." "Well," he said, "if you're going to be a neurologist, you're going to have to be a neuropsychiatrist because you can't make a living as a neurologist." And when I thought about it, of course, Dr. Alpers, who really loved neurology, and Dr. Joseph Yaskin, a professor of neurology with whom by then I had become acquainted, both practiced psychiatry very heavily. But really their personal interest, their teaching, their investigations, were all in neurology, not in psychiatry. It was obvious they were practicing psychiatry for economic reasons. So Dr. Grant said, "Well, if you're going to do that, you should do neurosurgery." Now that was a bit of an anachronism, because to a certain extent, Dr. Grant didn't think you could make a living from neurosurgery either, in those days. That was before Blue Cross, before third-party payments. We would have 50 patients in the university hospital; five would be private and 45 would be free patients. I'm sure that Dr. Grant made a good living; he himself was personally wealthy and probably had more income from his inheritance than he made in practice. Certainly a young man just starting out would never think of making a living. It is only in the last decades, due to the system under which we operate being made so remunerative to do procedures, that neurologists have been able

to make a fabulous living in doing just neurology and not touching psychiatry at all.

INTERVIEWER: Here you are, Dr. Grant has asked you to be a neurosurgeon. What were your plans after that, did that convince you in itself?

SHENKIN: First of all, prior to World War II, there weren't many residencies available; most people became specialists through an apprentice mechanism. They became assistants to surgeons, to established internists, and there weren't even any certification boards until the mid-1930s. So it didn't take much deliberation to accept the offer. Also, I was terribly flattered by Dr. Grant, who was such an awesome and respected person to me. Incidentally, not only were there very few residencies, but internships, too, were in short supply in relation to the number of medical school graduates. So it was like a seller's market, the seller being the hospital, and at the end of the year there was always a percentage of medical graduates without an internship, and they had to scrounge among the less desirable hospitals to get one, since you had to have a year's internship to get a license. The better and more desirable internships were two years, without pay, and actually were filled by examination. I had to take a full day of oral examinations to get an internship at [Philadelphia General Hospital].

INTERVIEWER: How about specifically for the field of neurosurgery? What were your opportunities?

SHENKIN: Well, when I finished my training in 1945, I had considerable aspirations, particularly at the University Hospital, because there was Dr. Grant and then there was me. When I finished he had asked me to stay on to give him a hand. I was born in Philadelphia, educated here; my wife was a Philadelphian; we were quite comfortable here socially; I just couldn't think of leaving. Dr. Grant gave me a handsome income — I was working for him — and I think I made $3,000 a year . . . and he allowed me to have private patients at the Graduate Hospital, but there weren't many of them to come by. I don't know if I made another thousand in private practice. First there weren't many private patients before Blue Cross, and secondly, they didn't want a young, newly turned out surgeon. I was doing a lot of surgery but it all was for Dr. Grant at the University Hospital and I was helping train the residents and others.

But I soon found out I really had no future at the University Hospital, and when I approached Dr. Grant on the subject, in 1949 or 1950, he agreed with me that, "We did it for Rav [Dr. Isidor Ravdin], but I don't think we can do it for you." When I first came to the University Hospital, in the late 1930s and early 1940s, there were very few people that were Jewish that were making any headway, particularly in surgery. I think that was the most important element, and I wasn't the most reserved of individuals. In retrospect, the barrier might have been broken, but it wasn't my type of personality to accomplish that. And I guess I wasn't distin-

guished enough scientifically to overcome all that, but if you compare me to what was available then and subsequently, I was in a good position. Surgically, Dr. Grant had given me a chance to operate a huge amount and obviously trusted me, and I was doing a great deal of research for an active surgeon.

As a matter of fact, as far as I can remember, I had the first [National Institutes of Health] Grant at the University Hospital. Let me go back. While a resident at the University Hospital, I had the opportunity to collaborate with an old classmate of mine, Dr. Seymour Kety, who was in the Department of Pharmacology. He was very innovative and created a method for quantitatively determining the cerebral circulation in the human. I was able to be a clinical colleague of his, and I also, fortunately, had some decent physiological ideas too. I did publish a few papers on experiments — on patients! — that were of help in validating the method. So I was productive. In the 1940s I guess I published 40 or 50 papers, about evenly divided between clinical investigation and experimental research — I can't remember exactly. As I said, at that time I was among the first, if not the first — I can't be certain — to have had an N.I.H. grant in the University Hospital and I established a cerebral blood flow lab on the fifth floor, in the Department of Neurosurgery. My first grant was for $5,000 or $10,000, but that was a lot of money in those days. Enough to employ a technician or two. Before that, Kety and I use to spend our weekends over in the medical school "Van Slyking" the blood specimens for their gas contents. They had been kept on ice from experiments done during the week.

So . . . I decided to leave, I didn't get fired, . . . well, I could have gone on with no advancement . . . I was assistant, or maybe even associate, professor by now. I don't think they would ever have gotten rid of me — just pushed me aside. But I was ambitious and at that time I did my clinical work at the Graduate Hospital, and so I transferred my laboratory there. Robert Groff was head of the Department of Neurosurgery at the Graduate, and at the behest of Dr. Yaskin we became associated in practice. My situation with him was very unfavorable in the office — and our association lasted only a short time, maybe a year or two. By now I had become attending surgeon at the Mount Sinai Hospital (inherited from Dr. Grant) and the St. Agnes Hospital. And I was asked by William Erb to attend the Taylor Hospital where he had a very active general surgical practice. From there I became attending neurosurgeon at Chester Hospital and also at the Delaware County Hospital. I would run to all these hospitals, and their emergency rooms, and often transfer patients to the Graduate Hospital for major surgery.

INTERVIEWER: Did Philadelphia have a lot of neurosurgeons?

SHENKIN: No, we didn't have a lot. Maybe by that time we had a half dozen, certainly no more than between five and ten.

INTERVIEWER: How did you get along after going it alone?

SHENKIN: I decided that, sometime at the end of the 1950s, I would have

to establish my own center. I was interested in having a residency program because I didn't think I could make real progress without it. I looked around to what was available to me, but all the desirable medical schools were well occupied. I decided the Episcopal Hospital, which at that time had five hundred beds, with less than 20 percent being private ones, offered the best opportunity. They had huge wards, offering material for residency training, and I could supplement that with patients transferred from the other hospitals I attended, and from what private practice I was developing in my office. Actually I always had to pursue the patients; neither I, nor the Episcopal, had sufficient charisma to attract them in sufficient numbers for a training program — though I think we used to frighten some of the medical schools. Eventually, I was successful in getting approval for an independent residency program . . . unconnected with a medical school . . . .As I look back, I guess I was rather presumptuous, but to tell the truth I think the inspector was enamored of the beautiful, and large, chapel at the Episcopal Hospital and couldn't turn us down! The approval for a residency program first became available to me in 1960 and I had a fully approved independent program from then until my retirement, and that is the story of my practice. I had transferred the research lab from the Graduate Hospital to the Episcopal, and by that time I was getting about $50,000 a year, which was a lot of money, or at least I thought so. The Episcopal Hospital gave me a nice big room, a huge former operating room with attending small rooms, and I moved the lab there. By this time I was able to afford a chemist, at least two technicians, and somebody as a laboratory assistant to clean up. I kept the laboratory alive until the 1970s . . . 1975 or 1977.

In 1974 Dr. Weinstein, who was looking after neurosurgery at the Medical College of Pennsylvania, joined me in practice and shortly thereafter, they asked me to come over there and head the section as professor. They really may have wanted our CAT scanner at the Episcopal, which was the first one in Philadelphia by at least six months, and probably our residency program. They did get more neurosurgery being done, though I never found it conducive to put all my eggs in their basket, and why is too long a story. They finally did get the training program freed from the Episcopal after I retired . . . previously I had made it a joint one.

INTERVIEWER: Who was top of the league in the field of neurosurgery in the 1930s?

SHENKIN: Well, in the early 1930s the pioneers, [Harvey] Cushing, [Charles H.] Frazier, and [Ernest] Sachs in St. Louis, were ending their careers. [Walter] Dandy at the Hopkins was a little younger, and he and Cushing were arch-rivals and therefore he was somewhat on the "outside" of actually a tight-knit superstructure in the Society of Neurosurgeons. In the late 1930s, the men trained by the pioneers, especially Cushing's men throughout the country, took over. They formed the Cushing Society to

include more of the neurosurgical field, and later that became the American Association of Neurological Surgeons. But the Society of Neurosurgeons remained the elitist group.

Dr. Frazier trained, among others, Francis Grant, Max Peet at Michigan, Jim Gardner at the Cleveland Clinic, and [James] Watts at George Washington University and they were important figures. Watts got involved with Walter Freeman, also a Philadelphia product, in lobotomies.

INTERVIEWER: Yes, I know that story well.

SHENKIN: I guess they shudder at the thought now.

INTERVIEWER: He [Watts] doesn't shudder at the thought now.

SHENKIN: Well, I don't think he knows, or better, is aware of the philosophical aspects. It was a bad deal. It's like, I'll tell you the truth, like something I've concluded after having thought about it only two months ago — it being unethical to do research on primates . . . as I think back to my experiences in research in the primate lab at Yale in 1941–1942. Lobotomies, too, probably are really unethical . . . . As a matter of fact, I left research on the cerebral circulation because I thought it had become unproductive in a practical way and therefore it was unethical to pursue it. Despite all the expense it had been — millions of dollars, maybe a billion dollars, has been spent on research in cerebral circulation and the practical contributions have been small — most of the studies were only refinements on previous ones. Actually, Kety and I only verified the qualitative conclusions of the people who had gone before us . . . we only quantitated what they qualitatively deduced. And our contribution in overall physiological knowledge was minimal. Kety's technique was elegant, and it had to be done . . . after all it couldn't have been foretold that its contribution to physiology would not be overwhelming. But, I saw no new avenues to go into that would be of clinical significance. I'm not talking about physiology, but I could think of no application that was promising. At the time I gave it up, in the early 1960s, I was one of the few people in the world that had the ability to quantitatively measure the human cerebral circulation. Every day we did a quantitative study on the cerebral circulation of some abnormal patient in my laboratory at the Episcopal Hospital. I couldn't think of any application, diagnostically or therapeutically that I could aim at, and I use to lie awake at night thinking about it. I kept saying to myself: you're a clinician, not a physiologist, you have to find something to make it useful. I got into terrible arguments about this, but I didn't have enough stature to make it stick. But I did have some terrible confrontations with people — like a professor of neurology at H.U.P. who was research-oriented, but didn't know about the cerebral circulation. The focus of our lab then was

turned from the cerebral circulation to the metabolism of the neurosurgical patient.

INTERVIEWER: How did World War II change the profession in your eyes? Was it the type of problems, or the number of neurosurgeons, your practice?

SHENKIN: I was a resident all through the war. I had an unusual opportunity. Dr. Grant was involved in teaching army surgeons how to do neurological surgery. He would be out of town a good bit, on assignment, and I operated day and night.

Following World War II, I don't think it was a consequence of the war, but with the development of science there was a big burgeoning of medicine in which neurosurgery participated . . . I lived in a very privileged time. In my lifetime, in my professional lifetime, medicine went from being unable to contribute too significantly to the welfare of patients to a point where now it can truly influence the course of disease. Prior to the past several decades doctors could do very little therapeutically. I actually lived in, and went to medical school in, a time before antibiotics. Antibiotics were a huge, a quantum, advance. First, when I was a neurosurgical resident, the duty of the resident was to spend a half day on dressing patients — changing dressings and treating the infections . . . in those days perhaps five percent of operated patients became infected. And second, we saw many patients whose problem was infection to start with . . . we were seeing complications of middle ear disease and mastoiditis and sinusitis, there always were brain abscess and cranial osteomyelitis patients on the service. Cranial and intracranial infections were a big part of neurosurgery and since about 1950 these patients are not seen except on occasion and only then from year to year. Now dressings don't take any time and the elaborate dressing cart is a thing of the past. So that was one big change. Of course the biggest changes came in diagnostic and operative technical developments. When I was a first year resident at H.U.P. my senior resident, Sid Govons, introduced the first cerebral arteriograms done in Philadelphia. We cut down on the artery and used thorotrast — ouch!

INTERVIEWER: Well, tell me about your experience at the University Hospital when you had to deal with psychiatrists.

SHENKIN: Well, I did deal with them, they offered patients for lobotomy and I would, or would not, accept them. I didn't pick them . . . I didn't participate in the selection from the psychiatric point of view, that was their privilege and responsibility.

INTERVIEWER: Did you follow up on the patients, did you see the patients at all?

SHENKIN: Well, maybe occasionally a couple of months later. I was not seriously interested in the proposition in the way Jim Watts was, not seri-

ously. I had some reservations about it; I often thought of it as a modified form of euthanasia, and as I look back I think it was unethical. Incidentally, Moniz got the Nobel Prize for lobotomy and that was a mistake. He deserved a Nobel Prize for introducing arteriography. He should have got it for that, not for lobotomy. Lobotomy was not a legitimate technique. Even then we should have known it wasn't, but I wasn't thinking about it, certainly not enough to participate in a political way.

INTERVIEWER: How about Grant's attitude on the operation?

SHENKIN: He didn't care.

INTERVIEWER: Was it just extra business?

SHENKIN: Yeah, I don't think he had any philosophical thoughts about it, or even physiological ones. I didn't either at that time, so, I mean I'm not criticizing him, it just was extra business. Not one of *our* bag of tricks, we did it but . . . not like Jim Watts . . . That was his *raison d'etre.* And Freeman, he was a bright guy, I don't know what he thought. Well, it was the times; since then things have progressed. I shouldn't be critical. They were over-aggressive about it, but my criticism is only retrospective. At the time I didn't think about it — or even about chasing patients around the room to give them metrazole when I was an intern at P.G.H.! I'm so happy I had no more to do with lobotomy then, than I did. I regret that I did what I did with it . . . do you understand? I used it for pain, I wrote a paper on it in the control of pain. They were people who were terminally ill, so I remember rationalizing it in my mind as a modified form of euthanasia. That was O.K. with me. You hoped you didn't vegetize the patient too much. I remember doing as little as I could, and maybe if I had done more extensive cuts the results would have been even better.

INTERVIEWER: How is it for young neurosurgeons today starting out?

SHENKIN: Well, its getting tougher, you know, there's getting to be an oversupply, but they all make a fortune — indeed much too much. I think our system is terrible, they don't do a lot . . . of the varied kinds of work that should make it satisfying . . . They don't do a lot of the important surgery, unless they have a good academic appointment, which I guess is getting tougher, too. I suppose I'm talking about big city practice. Many young neurosurgeons starting out look for a place in the backwater, where there isn't anybody . . . and that's harder and harder to find . . . or they join somebody in their practice who's looking for relief from being on duty all the time. It's remunerative enough, too remunerative, that they do very

well. But I don't think the opportunities for doing the amount and variety of surgery are like when I started . . . Indeed, I know they aren't.

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Smith Ely Jelliffe and the Immigration of European Physicians to the United States in the 1930s

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Smith Ely Jelliffe (1866–1945) was an American neurologist, psychiatrist, and editor of the *Journal of Nervous and Mental Disease* (JNMD). In his capacity as editor, Jelliffe acquired an international reputation within medicine for his writing and publishing. With William Alanson White, Jelliffe formed the Nervous and Mental Disease Publishing Company to bring translations of relevant medical books to American neurologists and psychiatrists. In addition, Jelliffe and White started the *Psychoanalytic Review,* the first English language journal devoted to psychoanalysis, and co-authored *The Treatment of Nervous and Mental Diseases,* one of the first textbooks to emphasize the interrelationship of neurology and psychiatry and give credence to psychoanalysis.

During the 1930s, Jelliffe, like many other Americans, was asked to help those European physicians trying to immigrate to the United States. As doctors, particularly psychiatrists, fled Hitler's oppressive reign, many turned to Jelliffe because of his European connections and international reputation as a proponent of psychoanalysis. Indeed, Jelliffe, with Abraham A. Brill and James Jackson Putnam, achieved the distinction of being the first three psychoanalysts in the United States. In the pages that follow, I examine Jelliffe's role in the immigration of European physicians to America during World War II, focusing on some of the specific cases he facilitated.

Background

Adolph Hitler's rise to power in Germany precipitated the crisis that led Jelliffe and others within the medical community to be called upon to provide aid to their European colleagues. On 30 January 1933, Hitler gained control of the government, and the new Nazi regime moved rapidly to change political realities. On 1 April 1933 the first large-scale anti-Jewish demonstrations began, in the form of a boycott of all Jewish-owned shops and the offices of Jewish professionals. Shortly thereafter, a series of laws and

Transactions & Studies of the College of Physicians of Philadelphia Ser. 5, Vol. 12, No. 1 (1990); 49-67
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decrees were promulgated: paragraph three of "The Law for the Restoration of the Professional Civil Service," published on 7 April 1933, provided for the compulsory retirement of all non-Aryans. Paragraph two of the "First Implemental Decree," published on 11 April 1933, legally defined a non-Aryan ("Nichtarian") as anyone with at least one grandparent who was not an Aryan. On 25 April, "The Law Against the Overcrowding of German Schools" reduced the percentage of non-Aryans admitted to each school or university to 1.5 percent. These legal devices rendered the study, teaching, and practice of medicine by Jews almost impossible. Not only Jews, but all individuals whom the authorities considered undesirable for political or other reasons were placed in a precarious situation. For example, in 1933, the medical historian Erwin Ackerknecht, who wrote his M.D. thesis in 1931 under Henry Sigerist at Leipzig, hurriedly left Germany for France to escape the Gestapo, who were looking for him because of his Socialist activities. (He arrived in the United States with his family in 1941, having only $80 in his pocket.)[1] The endocrinologist Hans Bauer left Germany in 1937 because he wanted to marry his Hungarian-Jewish sweetheart, which was legally impossible under the new regime.[2]

Psychoanalysis, which was valued more in Europe as a general theory of civilization than as a means of providing individual therapy, became highly politicized. Russell Jacoby, in his book *The Repression of Psychoanalysis*, used the term "political Freudians" to describe those who were both analysts and political rebels, i.e., Socialists and Marxists, a commonstance among the second generation of psychoanalysts who were born near the turn of the century.[3] Among the early psychoanalysts who identified themselves as Socialists or Marxists were Paul Federn, Helene Deutsch, Siegfried Bernfeld, Herman Nunberg, Annie and Wilhelm Reich, Edith Jacobson, Willi Hofer, Martin Grotjahn, Karl Landauer, Bruno Bettelheim, Ernst Simmel, and Otto Fenichel. These analyst-activists were at a critical point in the middle of their careers when Fascism forced them into exile. They practiced primarily in Berlin and Vienna, and

1. Erwin Ackerknecht, 15 May 1985, personal communication to author.

2. Hans Bauer, 6 January 1986, personal communication to author. Bauer is an example of an emigré physician who made a smooth adaptation to life in the United States.

3. Russell Jacoby, *The Repression of Psychoanalysis* (New York: Basic Books, 1983), p. 12.

their projects frequently overlapped.[4] A crushing blow came in October 1933, when the Congress of Psychology held in Leipzig banned psychoanalysis as a "Jewish science." Soon after that, all psychoanalytic literature was banned and the practicing psychoanalysts rapidly dispersed.[5]

In 1937, Jelliffe received a letter from Martin Grotjahn, who was at the time working at the Menninger Clinic in Topeka, Kansas, describing the difficult conditions under which he had practiced psychiatry in Nazi Germany. He wrote Jelliffe:

> I should explain to you why I did not mention your work. I am familiar with a great many of your papers which I read when I could obtain them, which was not always easy in Germany . . . When writing my paper I wanted to obtain additional information from the English literature, but became frightened, confused and discouraged by the abundance of material available. You have no idea how deeply the American journals have impressed me after living for four years in Nazi Germany without English literature, and after being at the University of Berlin, which is supposed to be the German center of research, but which has been a little short of sterile in the last few years. An additional excuse I may offer is that it was impossible for me, educated in Germany to look for an authority in psychiatry for support and suggestions for a paper dealing with psychoanalysis. In Germany, no psychiatric authority supports psychoanalysis and I was naive enough to expect the same situation in this country.[6]

Grotjahn, who was born in 1904, headed the clinic for neurology and psychiatry at Berlin's Charité Hospital, before coming to the Menninger Clinic in 1936. He left there in 1938 to go to Beverly Hills, California. During World War II, he was a Major in the U. S. Army Medical Corps.

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4. Ibid., p. 12.

5. Marie Jahoda, "The Migration of Psychoanalysis: Its Impact on American Psychology," in Donald Fleming and Bernard Bailyn, eds., *The Intellectual Migration* (Cambridge, Mass.: The Belknap Press of Harvard University Press, 1968), p. 420. For the revisionist view of psychotherapy's status in the Third Reich, see Geoffrey Cocks, *Psychotherapy in the Third Reich: The Göring Institute* (New York and Oxford: Oxford University Press, 1985). Cocks reveals the ways in which psychotherapy and psychoanalysis continued to develop in Hitler's Germany, most notably in the institutional setting of the Göring Institute under the direction of Matthias Göring, psychotherapist and cousin to Reich Marshal Hermann Göring.

6. Martin Grotjahn to Jelliffe, 27 August 1937. LC Box #8.

7. *American Men of Medicine*, 3rd ed., (Farmingdale, N.Y.: Institute for Research in Biography, 1961), p. 272.

The rapidity with which political events affected an individual physician's life can also be seen in the correspondence between Jelliffe and Robert Wartenberg, *Oberarzt der Nervenklinik* (head physician of the Neurological Clinic) at Freiburg, Baden, Germany. In August 1933, Wartenberg wrote:

> I hope you will remember me from my visit in New York in 1926 as a fellow of the Rockefeller Foundation. Please excuse my troubling you with this letter. I am in a very difficult condition of my life and dare to apply to you for help and advice . . . As a non-aryan man, I cannot find any position in Germany . . . As a front soldier and politically unsuspected man . . . I can remain for some months at the clinic . . . I fear there is absolutely no place for me in Germany for long . . . I do not long for an honorable position and big salary, but only for the bare existence.[8]

Later in March 1934, he wrote, "[S]ince I wrote to you in Autumn 1933 the conditions have become so unbearable that I am compelled to leave the country at once."[9] By 1936, Wartenberg had obtained a position at the Medical School in San Francisco, California.[10]

The final blow for many physicians came on 15 September 1935, when the so-called Nuremberg Laws were adopted. These laws provided a precise definition of a "Jew" by origin, religion, and family ties, and deprived them of their status as citizens of the Reich. Nonetheless, "classification" of some people proved to be confusing. For example, the German physician Ernst Rudin described his colleague Franz Kallmann, who was an exceptionally able physician trained in brain pathology, clinical psychiatry, and the genetics of mental disease, as a Jew.[11] Kallmann, who had been *Oberarzt* (head physician) at the Berlin Psychiatric Asylum until 1935, described himself as a Christian with an Aryan wife.[12] An-

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8. Robert Wartenberg to Jelliffe, 25 August 1933. LC Box # 19. A "front soldier" refers to the fact that he saw action on the battle front in World War I. In German law, it often implied that some special consideration was to be given to such an individual, e.g., he would be allowed extra time before being ousted from a position.

9. Ibid., 28 March 1934.

10. Ibid., 8 July 1936.

11. Ernst Rudin to Rockefeller Foundation, 6 December 1935. Fellowship File, Kallmann, Record Group 10, RFA.

12. Fellowship File, Kallmann, Record Group 10, RFA.

other source described him as a half-Jewish Berlin psychiatrist.[13] The Rockefeller Foundation diplomatically described him as a "deposed" German neuropsychiatrist, because his Jewish ancestry had forced him to give up his position.[14]

Many American physicians were concerned about the persecution of their German colleagues. Jelliffe was among those physicians and dentists invited to attend a rally on 6 June 1933 to help raise funds for those who wanted to leave Germany.[15] Over the years, various groups held meetings to try to honor requests for aid from European colleagues. They sought such things as immigration affidavits, professional appointments, and financial aid.[16] Jelliffe was involved with two groups in particular: the Committee in Aid of Displaced Foreign Physicians, which was headed by Dr. Lawrence Farmer, and a smaller group, the Emergency Committee on Relief and Immigration of the American Psychoanalytic Association, which was founded in 1938 by Dr. Lawrence Kubie. Between 1928 and 1938, 1,400 German, Austrian, and Italian physicians immigrated to the United States, with one thousand of them coming between 1933 and 1938. Of this total, 25 percent were either Catholic or Protestant, and 75 percent were of Jewish or partially Jewish origins.[17]

Even before Hitler's rise to power, many physicians had left Germany because of the economic conditions there, seeking new positions in the United States. In 1933, Jelliffe wrote to Adolf Meyer, "[W]ith the apparently Anti-Semitic movement in Germany undoubtedly many able psychiatrists will be seeking our shore and I am disposed to help the more worthy ones."[18] In 1934, he wrote to S. A. Kinnier Wilson, in England, "[T]he foreign physicians are pouring in on us and in masses."[19] However, the Depression created major economic difficulties for those wishing to immigrate to the United States. In 1933, Jelliffe had made an informal survey by visit

13. Benno Muller-Hill, *Murderous Science: Elimination by Scientific Selection of Jews, Gypsies and Others, Germany 1933– 1945,* G. R. Fraser, trans., (New York: Oxford University Press, 1988), p. 11.

14. Fellowship File, Kallmann, Record Group 10, RFA.

15. S. Tannenbaum to Jelliffe, 6 June 1933. LC Box #18.

16. Walter Briehl, 19 January 1982, personal communication to author. See also, Central Coordinating Committee for the Resettlement of Foreign Physicians, AP.

17. Raoul Hilberg, *Documents of Destruction: Germany and Jewry 1933–1945* (Chicago: Quadrangle Books, 1971), p. 16.

18. Jelliffe to Adolf Meyer, 10 April 1933, ACM.

19. Jelliffe to S. A. Kinnier Wilson, 29 October 1934. LC Box #22.

and by mail of nearly one hundred institutions, including hospitals, clinics, and universities, and found that all of them were turning away physicians, reducing their staffs, cutting salaries, and making strenuous efforts to keep within their budgetary limits. Even the best institutions felt the strain; in a 1933 letter, Meyer wrote of the situation at Johns Hopkins, "I am exceedingly sorry that we are in quite a little jam with our budget so that we have to think in terms of retrenchment rather than expansion."[20] Jelliffe phrased it quite poignantly in a 1934 letter to von Weizacker in Germany:

> There has been in the U.S.A. much cutting down of budgets and physicians here are themselves hunting for positions just as elsewhere. The financial positions here are anything but healthy and even the most assured among us are having special difficulties because of the loss of values of all kinds and the excessive taxation efforts made by the politicians to retain their own salaries. The times are "sehr Ungustig" [sic] with us. I wish it were otherwise . . . Dr. Goldstein is now here and is seeking a position and we fear it will not be easy for him to find one. If so outstanding a scientist finds it hard to get even a very minor position you can understand what it must be for a comparatively young and unknown man to get one.[21]

Often European physicians who had held prestigious positions as department or clinic heads could not find equivalent positions in the United States. As Sidney I. Schwab confided to Jelliffe in 1933:

> [i]t seems to me that the present time is not a particularly favorable one for the importation of even very exceptional men. I should imagine that the best thing for Jewish psychiatrists would be to wait until the present regime is disposed of. As far as I can make out Hitlerism is bound either to destroy the German government or be destroyed by violent uprisings against it. I cannot see the possibility of the thing keeping on much longer . . . I cannot see the wisdom of asking a man who has held a distinguished and important position to come to a place where he would not feel at home in the first place and where his professional life in comparison to that which he had left would seem to him unimportant and uninteresting.[22]

But events were not to be as Schwab predicted.

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20. Adolf Meyer to Jelliffe, 12 April 1933, AMC.
21. Jelliffe to von Weizsacker, 23 October 1934. LC Box #19.
22. Sidney I. Schwab to Jelliffe, 17 April 1933. LC Box #17.

Jelliffe's Involvement

Jelliffe responded to the plight of his European colleagues in various ways. In at least two cases, he invited refugee psychiatrists to stay at his own home. The stories of Kurt Goldstein (1878–1966) and Felix Plaut (1877–1940) illustrate the complex professional and political dynamics of the great psychiatric exodus of the 1930s.

Kurt Goldstein was a German neurologist and psychiatrist who had held a faculty position at the University of Berlin. In 1933, when he was 55 years old, he was dismissed from his post as the director of the Neurological Section of Berlin's Moabit Hospital and imprisoned. After his release from prison, he fled to Amsterdam. Jelliffe wrote to Goldstein there in 1933, telling him that, should he be able to emigrate to the United States, Jelliffe could accommodate him in his home in New York. He also warned him, "We have had a large influx of foreign physicians, which began 5–6 years ago and most of the positions are occupied."[23] In early 1934, Jelliffe wrote M. Wertheimer to tell him that he had invited Goldstein to live and eat at his home for at least six months, but that he could not invite Goldstein's wife and children as well.[24]

Six weeks later, Jelliffe again wrote to Wertheimer, "I have heard that Dr. Goldstein is an active Communist agitator. If that is so I must withdraw my invitation to him entirely."[25] Wertheimer, in his reply, not only denied that Goldstein was a Communist but noted that in 1918 he had been a Pacifist. Furthermore, he suggested that Jelliffe contact Paul Tillich, the Gast Professor at Columbia University and at Union Theological Seminary, who knew Goldstein well and could vouch for him.[26] Jelliffe accepted Wertheimer's reference and was obviously mollified because he once again wrote to Goldstein, "I will be very glad to have you use my house as a home if you come in September. My wife and I will both be away . . . My house is open and my secretary, Miss Marian Cohen, will be there and will make you comfortable."[27] I have not been able to verify whether Goldstein did indeed stay at Jelliffe's home.[28]

23. Jelliffe to Kurt Goldstein, 7 November 1933. LC Box #7.
24. Jelliffe to M. Wertheimer, 5 March 1934. LC Box #19.
25. Ibid., 26 April 1934.
26. Wertheimer to Jelliffe, 11 May 1934. LC Box #19.
27. Jelliffe to Kurt Goldstein, 25 July 1934. LC Box #7.
28. Esther Tuttle, 28 January 1976, 18 July 1986, personal communication. Mrs. Tuttle was Jelliffe's niece and lived in his home for a time in the 1930s. Because the house was large, Jelliffe's second wife, Belinda Dobson Jelliffe, often rented some of the rooms. Mrs. Tuttle was told by the Jelliffes' housekeeper that there was a

From 1933 to 1934, Goldstein was at the University of Amsterdam on a stipend paid both by the Rockefeller Foundation and the Dutch Relief Center. Although the Rockefeller Foundation wanted him to stay there, Goldstein declined. According to Dutch law, neither he nor his wife could establish a private practice and they felt that they could not adequately support themselves under those circumstances. Goldstein finally did immigrate to the United States where he was employed by Columbia University as a research assistant in psychiatry at Montefiore Hospital. Of his $3,000 annual salary, $1,500 was paid by the Rockefeller Foundation. He worked at the hospital in the morning, and saw private patients at an office in the afternoon. Because of the intense medical competition, he could not make a living in private practice. By 1938, Goldstein was a clinical professor of psychiatry at Columbia University. In 1939, his grant at Montefiore Hospital was discontinued and in 1940 he went to Tufts College.[29]

Kurt Goldstein appreciated Jelliffe's assistance during his first year in the United States, as we see in an inscription in the fly-leaf of Goldstein's book, *The Structure of the Organism*: "To Dr. Smith Ely Jelliffe, host, advicer (sic) and friend. Surviving the initial difficulties in this country. Yours very thankfull (sic), Kurt Goldstein. November 1934."[30] In 1938, Goldstein wrote to Jelliffe, "I think very often to you (sic) and how much you as the one (sic) have helped me in our difficult first year in this country. I feel myself grateful (sic) and obliged to you."[31] Jelliffe responded, "It was very gracious of you to write such a nice note . . . It makes me feel all the more certain that what very little I have tried to do to aid you in gaining a foothold in your foreign home has been more than justified by the gifts that you have conferred upon your new friends and fellow workers."[32]

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foreign physician staying in one of the rooms. I do not know who that may have been. It was Mrs. Tuttle's comment and the large number of letters from emigré physicians in the Jelliffe papers at the Library of Congress that led me to write this paper.

29. Fellowship File, Goldstein, Record Group 10, RFA. See also, undated newspaper clipping, LC Box #7, and *American Men of Medicine* (Farmingdale, N.Y.: Institute for Research in Biography, 1961), 3rd edition of *Who's Important in Medicine*.

30. Kurt Goldstein, *Der Aufbau der Organismus* (Haag: Martine Nimhoff, 1934). Book located in the Jelliffe Collection at the C.C. Burlingame Library at the Institute of Living, Hartford, CT.

31. Goldstein to Jelliffe, 29 November 1938. LC Box #7.

32. Jelliffe to Goldstein, 12 December 1938. LC Box #7.

The case of Felix Plaut did not end so happily. Plaut, whose field was neurosyphilis, worked on serological problems related to psychiatry. In the 1920s, Plaut had stayed at Jelliffe's home during a trip to the United States. In 1936, Plaut was finally forced to give up his post as the director of the Serology and Experimental Therapy Institute within the Psychiatric Branch of the Kaiser Wilhelm Institute.[33] At that time, Jelliffe wrote to Plaut, "All that I can offer you is the shelter of my house in the city should you come. You can at least find there a base from which to work."[34] When Plaut did leave Germany he went to England, where the Rockefeller Foundation granted him £ 600 to work at Herter, a mental hospital at Epsom, Surrey. The severity of air raids forced the evacuation of Herter on 14 October 1939, but Plaut was asked to stay and work in the malarial unit, the only unit to remain at the hospital.[35] In 1940, Plaut committed suicide, rather than be sent to an English internment camp for aliens.[36]

Jelliffe faced many difficulties in trying to place emigrating physicians, as he explained to the Dutch neurologist B. Brouwer, who wrote him in 1933 on behalf of Dr. Igersheim of Frankfurt am Main. (Jelliffe's daughter Helena worked in Brouwer's lab.) Igersheim had written to Brouwer explaining that official government policy, which warned all persons not to use the services of Jewish physicians, made it virtually impossible to practice medicine. In his letter to Jelliffe, Brouwer sought help in finding a placement for Igersheim in the United States.[37] Jelliffe responded to Brouwer, "The greatest difficulty is here (sic) that so many of the Jewish professionals anticipated the crisis and are already here in excess so that it is becoming even more difficult to allow them into the country. The 'quotas' even for scientists are being strictly enforced."[38]

Jelliffe used his own prestige to work around these quotas. In November 1934, Jelliffe wrote to Drs. Stanley P. Goodhart and Bernard Sachs in New York City to see if they could assist Dr. Gotthard Cohn of Hamburg, Germany, who was born in 1899 and earned his M.D. in Germany in 1923; "[A] former worker with

33. Felix Plaut to Jelliffe, 12 May 1936. LC Box #14.
34. Jelliffe to Felix Plaut, 2 June 1936. LC Box #14.
35. Fellowship File, Plaut, Record Group 10, RFA.
36. Walter Mayer to Jelliffe, 23 August 1940. LC Box #14.
37. Copy of a letter from D. Igersheim to B. Brouwer, August 1933. LC Box #3. See also, B. Brouwer to Jelliffe, 16 August 1933. LC Box #3.
38. Jelliffe to Brouwer, 27 August 1933. LC Box #3.

Professor [von] Weiszacker in Heidelberg and from whom I have received words of commendation."[39] Jelliffe later received a letter from Gotthard Cohn Booth (he assumed the surname Booth after immigrating to the United States): "Thanks to your introductions Drs. Strauss and Goodhart are making arrangements for my working as a volunteer at Mt. Sinai Hospital and for continuing my research an (sic) Parkinsonism at Montefiore Hospital."[40] Booth was finally licensed to practice in New York in 1935.[41]

Often a psychiatrist emigrating to the United States would request a meeting with Jelliffe. Such was the case with Dr. Clemens Ernst Benda who wrote in 1935, "I am staying in New York for a few weeks coming from Berlin, Germany . . . I should like to pay my respects to you and bring personally the greethings (sic) of Professor Weizsacker of Heidelberg and Dr. Ludwig Binswanger, Kreuzberger, Switzerland."[42] Benda, who was both a psychiatrist and a neurologist, was born in 1898 and earned his M.D. in Germany in 1926. Following his meeting with Benda, Jelliffe sent letters on Benda's behalf to C. Macfie Campbell and R. G. Haskins in Boston, F. J. Farrell in Providence, C. C. Burlingame in Hartford, and William A. White in Washington, D. C.[43] He was licensed to practice in Massachusetts in 1940, and after settling in Boston, Benda became active in psychiatric circles there.[44]

Personal connections clearly influenced Jelliffe's willingness to help an emigré. In 1934, he corresponded with F. H. Lewy of Berlin, a 49-year-old physician who had been *Professor Extraordinarius* at the University of Berlin and had published four books and 12 monographs in neurophysiology.[45] Although Lewy had had 20 years of clinical experience, Jelliffe was most impressed by the fact that Lewy had worked with Friederich Kraus, a German physician whom he greatly admired.[46] On 7 July 1934, Lewy wrote that he had left Germany and was now in New York.[47] Jelliffe wrote 18

39. Jelliffe to Stanley P. Goodhart and Bernard Sachs, 15 November 1934. LC Box #2.

40. Gotthard Cohn Booth to Jelliffe, 18 November 1934. LC Box #32.

41. *American Medical Directory* (Chicago, IL: A.M.A., 1950) 18th Edition.

42. Clemens E. Benda to Jelliffe, 5 November 1934. LC Box #32.

43. Jelliffe, letters dated 6 December 1935. LC Box #2.

44. *American Medical Directory.*

45. Fellowship File, Lewy, Record Group 10, RFA.

46. David Krasner, *Smith Ely Jelliffe and The Development of American Psychosomatic Medicine* (Ann Arbor, Michigan: University Microfilms, 1985), pp. 143–146. See also, book review of Thomas Brugsch and F. H. Lewy, *Der Biologie der Person. Ein Handbuch der allgemeinen und speziellen Konstitutionslehre. Unter*

letters of recommendation and inquiry on Lewy's behalf.[48] Through the efforts of the influential neurosurgeon Charles Harrison Frazier, the University of Pennsylvania hired Lewy. When he began working there on 1 September 1934, the Rockefeller Foundation underwrote $1,000 of his salary.[49] In 1935, Frazier wrote to Jelliffe to tell him that he wanted to keep Lewy working, but was unable to do so because of a lack of funds. Frazier wanted to know if he should write to the Rockefeller Foundation or to the Committee for the Aid of Displaced Foreign Physicians to help Lewy.[50] Lewy worked at the University of Pennsylvania from 1934 to 1936, when Frazier died. Because Lewy had had no permanent position, there was no one on the staff to support his cause. Inasmuch as he had passed his National Boards and was well liked by the faculty, his plight was resolved better than many others. In 1937, he was assured of at least two more years of support through grants from the Emergency Committee for the Aid of Displaced Foreign Physicians and the Philadelphia United Jewish Appeal.[51]

Jelliffe received many other requests for assistance. Bernd Goitz of Prague wrote to say that although he had been an *Oberarzt* in Germany, he was being forced to leave.[52] G. Wolpe, who was 40 years old, wrote from Switzerland asking for advice on how to come to the United States.[53] Erwin Stengel also wrote for help.[54] Although an affidavit on his behalf was sent by the Emergency Committee on Relief and Immigration of the American Psychoanalytic Association, he finally settled in Somerset, England.[55] Dr. Geoffry Stragnell, Jelliffe's son-in-law, asked for help for Werner Hochstetter, a psychiatrist and neurologist, who earned his M.D. in Germany in 1922.[56] He was licensed to practice in New York in 1939.[57]

Mitarbeit zahlreicher Fachmanner. 4 Band (Berlin: Urban u. Schwarzenberg, 1926–1929). Found on a copy of a page of *Münchener Mediziner Wochenschrift,* Nr 23, 7 Juni 1929. LC Box #7.

47. F. H. Lewy to Jelliffe, 7 July 1934. LC Box #11.
48. For Jelliffe's correspondence with and about Lewy, see LC Box #11.
49. Fellowship File, Lewy, Record Group 10, RFA.
50. Charles Harrison Frazier to Jelliffe, 5 April 1935. LC Box #11.
51. Fellowship File, Lewy, Record Group 10, RFA.
52. Bernd Goitz to Jelliffe, 18 April 1934. LC Box #7.
53. G. Wolpe to Jelliffe, 8 November 1937. LC Box #22.
54. Erwin Stengel to Jelliffe, 1 April 1938. LC Box #17.
55. PA Emergency Committee to Stengel.
56. Geoffry Stragnell to Jelliffe [on behalf of Werner Hochstetter], 6 December 1938. LC Box #17.
57. *American Medical Directory.*

Providing assistance for emigré-physicians was not only difficult but time consuming. Negotiations were often protracted, as shown by the case of Georg Gerö. Gerö, who was a Hungarian-born Lutheran, had studied psychology at the University of Berlin and earned a Ph.D. in psychology in 1925 and an M.D. degree in 1930, both from the University of Cologne. In that same year, he resumed his psychoanalytic training at the Berlin Psychoanalytic Institute, where he was part of Otto Fenichel's group of political Freudians. When the Nazis came to power in 1933 he was forced to flee.[58] On 16 November 1936, Jelliffe wrote to Georg Gerö in Berlin requesting a copy of Gerö's Heidelberg thesis, which dealt with Freud's and Breuer's theory of hysteria.[59] Gerö answered Jelliffe from Copenhagen, where he had settled after fleeing Germany.[60] At the request of the Emergency Committee, Jelliffe sent Gerö an affidavit in March of 1938.[61] Jelliffe also wrote to Knud Krabbe on his behalf.[62] Gerö claimed that Sandor Rado, Ernst Simmel, and Franz Alexander knew him personally.[63] Jelliffe then wrote to Rado on Gerö's behalf.[64]

Even for Gerö, immigrating to the United States proved difficult. He wrote to Jelliffe to say that the American consulate in Denmark had informed him that the Hungarian quota was filled for the next two years.[65] While in Denmark, Gerö had begun teaching at the Psychiatric Clinic at the University of Copenhagen. In August 1940, a position was obtained for Gerö to teach German and Psychology at the New Mexico College of Agriculture and Mechanical Arts at a salary of $4,000 a year for two years. The Emergency Committee borrowed $2,000 for him and an additional $2,000 was obtained from the Rockefeller Foundation. On 1 January 1941, Gerö arrived in San Francisco, having traveled via Japan, and proceeded to New Mexico. Gerö felt that being in New Mexico was a sacrifice,[66] and he left there to go to Tucson, Arizona, where he stayed until 1943, at which time he left to settle in New York City.[67]

58. Russell Jacoby, *The Repression of Psychoanalysis,* p. 67.
59. Jelliffe to Georg Gerö, 16 November 1936. LC Box #7.
60. Georg Gerö to Jelliffe, 16 July 1937. LC Box #7.
61. PA Emergency Committee.
62. Jelliffe to Knud H. Krabbe, 2 August 1937. LC Box #10.
63. Georg Gerö to Jelliffe, 3 January 1838. LC Box #7.
64. Jelliffe to Sandor Rado, 25 March 1938. LC Box #7.
65. Georg Gerö to Jelliffe. 28 June 1938. LC Box #7.
66. Fellowship File, Gerö, Record Group 10, RFA. See also, PA Emergency Committee.
67. PA Emergency Committee.

The appeals Jelliffe received from his colleagues abroad followed Hitler's rise to power throughout Central Europe. In the late 1930s, the focus of appeals to Jelliffe broadened to include Austria. On 13 May 1938, Hitler had annexed Austria to Germany. Immediately, legislation was enacted and enforced that led to the destruction of the Austrian Jewish community. Because there had been premonitions of this *Anschluss*, Jelliffe had begun to receive letters from Austria requesting help before the event. In fact, he received more letters of request for help in 1938 than in any other year. On 25 April 1938, Jelliffe responded to Edmund Bergler, a Viennese psychoanalyst, "I trust you are successful with your vise (sic). Dr. Dotterer has informed me of the Vienna situation and it is very discouraging."[68] Bergler, who was born in 1899, had held various positions at the Psychoanalytic Clinic in Vienna from 1927 to 1937 as well as conducting a private practice. He had managed to escape to Paris by the beginning of June, where he attempted to procure an immigration visa. He wrote from Paris again asking for Jelliffe's assistance.[69] On 18 June 1938, Jelliffe sent a series of form-letters to various American physicians in an effort to find a place for Bergler.[70] Because the initial attempt proved unsuccessful, Jelliffe sent another series of form-letters on 15 November 1938.[71] Bergler arrived in the United States in the Fall of 1938.[72] By 1941, he was in private practice in New York.[73]

In 1938, Josef Gerstmann, a psychiatrist, wrote to congratulate Jelliffe on his 35th anniversary as editor of the *Journal of Nervous and Mental Disease*. At the same time, he noted that he was being forced to resign his position as director of the Clinic for Nervous Diseases at the Maria Theresa Academy in Vienna, and was leaving for America.[74] Gerstmann was born in 1887, earned his M.D. in Vienna, and arrived in the United States in 1938. He obtained a job at a mental hospital in Sykesville, Maryland.[75] From 1940 to 1941,

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68. Jelliffe to Edmund Bergler, 25 April 1938. LC Box #2.
69. Edmund Bergler to Jelliffe, 4 June 1938. LC Box #2.
70. Jelliffe, letters of recommendation for Edmund Bergler, 18 June 1938. LC Box #2.
71. PA Emergency Committee.
72. Jelliffe, letters of recommendation for Edmund Bergler, 14 November 1938. LC Box #2.
73. *American Men of Medicine*.
74. Josef Gerstmann to Jelliffe, 15 May 1938. LC Box #7.
75. PA Emergency Committee. See also, Josef Gerstmann to Jelliffe, 2 January 1939. LC Box #7.

he was a consultant and research associate at St. Elizabeths Hospital in Washington, D. C., and from 1941 to 1944, he held the post of attending neurologist and psychiatrist at the Postgraduate Hospital in New York.[76]

Jelliffe received letters of recommendation from Otto Potzel and J. Warner-Jauregg for Leo Deutsch, a Viennese psychoanalyst.[77] Deutsch was both a neurologist and a psychiatrist. Born in 1903, he earned his M.D. in Vienna in 1928 and arrived in the United States in 1940. In his letter requesting aid, he noted that he had been the first assistant at the Neuropsychiatric Clinic at the University of Vienna.[78] Jelliffe, in his letters of recommendation, wrote, "Along with other doctors, Dr. Deutsch was forced to leave the institute on account of political events, within three days."[79] In 1941, he joined the staff of Rockland State Hospital in Orangeburg, New York, and was licensed to practice in New York that same year.[80]

For some doctors who wished to come to the United States, personal connections to internationally recognized physicians proved helpful. Such was the case of Joseph Breuer, who was born in 1913, earned his M.D. in Vienna in 1937, and became an internist specializing in tuberculosis. Although an internist, he sought help from a neurologist. In May 1938, Jelliffe sent a note to Lawrence Farmer, executive secretary of the Emergency Committee in Aid of Displaced Foreign Physicians, requesting an affidavit for Joseph Breuer, "a nephew of the Josef Breuer who with Freud published *[Studies] On Hysteria*."[81] In Farmer's response to Breuer, a copy of which was sent to Jelliffe, he wrote, "I am sorry to inform you that I do not know of a paid position for you in this country. Should you come there might be a possibility for you to find an opening affording board and lodging."[82] Jelliffe also wrote to Breuer, "The

76. *American Men of Science.*

77. Otto Potzel to Jelliffe, 28 April 1938. J. Wagner-Jauregg to Jelliffe, 30 April 1938. LC Box #5.

78. Leo Deutsch to Jelliffe, 23 May 1938. LC Box #5.

79. Jelliffe to Joseph Wilder, undated. LC Box #5.

80. *American Medical Directory.*

81. Jelliffe to Lawrence Farmer, 1 June 1938. LC Box #3. Wagner-Jauregg, in a letter he wrote to Jelliffe, referred to Joseph Breuer as the elder Breuer's grandson; J. Wagner-Jauregg to Jelliffe, 16 May 1938. LC Box #19.

82. Copy of a letter from Lawrence Farmer. Lawrence Farmer to Joseph Breuer, 9 May 1938, LC Box #33. Farmer was Executive Secretary of the Emergency Committee in Aid of Displaced Foreign Physicians.

whole procedure has become very complicated by reason of the great number of requests but I shall do what I can to help you."[83] To which Breuer responded, "You are very kind to answer my letter at once and to give some hope as to procuring my affidavit."[84] Breuer then sent a radiogram to Jelliffe, with a slightly hysterical message — given the state of events in Vienna at the time, one can sympathize with him — "Forgive troubling (sic) please cable whether affidavit was signed and if so when mailed to Consulate Vienna."[85]

One month later, Jelliffe received a letter from Breuer, who was by that time in London, in which he expressed a "thousand thanks" for Jelliffe's assistance. He also apologized for not having written any sooner, but explained that preparing to leave Vienna made his life very hectic.[86] After Breuer arrived in the United States in October 1938, he was granted some financial aid by the Emergency Committee of the American Psychoanalytic Association.[87] He was licensed to practice in New York in 1939, and passed his National Boards in 1940.[88]

Not only did Jelliffe and others help bring these physicians to the United States, they also helped them settle into American life. Their efforts included help in studying for the state board examinations, sending letters of support, and obtaining positions of employment. Werner Hochstetter, for example, wrote to thank Jelliffe for his help and to tell him that he was studying from 12 to 14 hours a day for his state board examinations.[89] Jelliffe wrote a letter to the Board of Regents of the State of New York, on behalf of Louis Jekels, a former Viennese psychiatrist, supporting his application for a license to practice medicine.[90] He aided Otto Marburg in obtaining a position at Columbia University's College of Physicians

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83. Jelliffe to Joseph Breuer, 31 May 1938. LC Box #32.
84. Joseph Breuer to Jelliffe, 14 June 1938. LC Box #2.
85. Radiogram from Joseph Breuer to Jelliffe, 23 June 1938. LC Box #2.
86. Joseph Breuer to Jelliffe, 11 July 1938. LC Box #2.
87. PA Emergency Committee.
88. *American Medical Directory.*
89. Werner Hochstetter to Jelliffe, 7 January 1939. LC Box #17.
90. Louis Jekels to Jelliffe, 15 July 1938. LC Box #9. Born in 1867, Jekels earned his M.D. in 1892 and was licensed to practice in New York in 1947, *American Medical Directory.*

and Surgeons.[91] Jelliffe also wrote letters of support on behalf of Sandor Rado and Alfred Gellinak.[92]

Jelliffe's attempts to be helpful were sometimes complicated by the age of the physicians: Max Lowy, for example, was 64 years old when he emigrated.[93] Sometimes even proximity to the great was not of much help in securing positions in the United States. Anna Freud wrote to Jelliffe on the behalf of Max Schur, Freud's personal physician:

> Now after my father's death, his doctor, Dr. Max Schur, is leaving for America. He has looked after him for 14 years up to the very end. I am immensely grateful to him. He is an excellent man and I am sure that he will make his way someway. But if there is anything you could do to help him along, would you do it? I should be most grateful.[94]

But Max Schur had to make it on his own. He had previously passed his medical boards, possessed a good knowledge of English, and had a physician-relative in whose office he could immediately set up his practice.[95] Schur later switched from internal medicine to psychiatry.[96]

Reactions in *JNMD* to the European Political Situation

In spite of his own personal and professional involvement in the plight of the emigré physician, Jelliffe appears to have had little interest in extending his concern to the pages of the *Journal of Nervous and Mental Disease*. The *JNMD* contained no editor's

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91. Otto Marburg to Jelliffe. LC Box #12. Born in 1912, Marburg earned his M.D. in Germany in 1937, and by 1944 was licensed to practice in Maryland, *American Medical Directory*.

92. Jelliffe had sent letters in support of Sandor Radó as early as 3 May 1933. LC Box #15. See also, letters of support for Alfred Gellinak. LC Box #7. Gellinak, born in 1901, earned his M.D. in Germany in 1927 and was both a neurologist and a psychiatrist. He was licensed to practice in New York in 1935, *American Medical Directory*.

93. Correspondence with Max Lowy, LC Box #12.

94. Anna Freud to Jelliffe, 28 September 1939. LC Box #7.

95. Dr. Helene Schur, personal communication, May 1986. Dr. Schur was Max Schur's wife.

96. Jelliffe also corresponded with and on the behalf of two Italian physicians. See, M. Wang to Jelliffe, August 1939. LC Box #19. See also, copy of a letter from L. S. Sellig to Lawrence Kubie, 23 September 1939. Kubie was chairman of the National Committee for the Resettlement of Foreign Physicians. LC Box #2. PA Emergency Committee; Marco Levi-Bianchini to Jelliffe, 27 January 1940. LC Box #2.

column; only the journal's "News and Notes" section offered a forum in which such issues might be addressed. Until 1936, there were rarely any comments in "News and Notes" on the placement of individual physicians in academic or professional situations in either the United States or abroad. In 1937, however, the situation changed. Frequent comments on professional placement, especially in Germany, appeared in "News and Notes." These comments, however, covered the entire political spectrum.

Consider, for example, two entries appearing in the "News and Notes" section, the first, in 1937 and concerning Ernst Simmel, the second a more general announcement about the state of neurology and psychiatry in Germany in 1939. First, "Dr. [Ernst] Simmel describes the Menninger Clinic of Topeka as the spiritual heir of his own sanitorium which he was forced to leave because of the political situation in Germany."[97] Compare:

> German Neurologists and Psychiatrists. The German Society of German Neurologists and Psychiatrists met this year in Weisbaden. The President, Professor Rudin, Munich, pointed out that psychiatry in its efforts for improving racial hygiene performed a timely and progressive service. He credited psychiatry with having been the first division of medicine to point out to the state and the national socialist party the dangers latent in psychopathic persons and to give impetus to the well known legal measures taken.[98]

Ernst Rudin was very active in Nazi medical politics.[99] There were also notices about the changes in medical appointments in German universities, about German neurologists who had retired, not because of the political situation, and who had been appointed to fill these vacancies.[100] Even after September 1939, when the Germans invaded Poland and started on their offensive in Europe, notices from Germany continued to appear until the end of 1940. Perhaps Jelliffe felt these notices spoke for themselves.

The "News and Notes" section also addressed American concerns about the European situation. Some American physicians who had considered attending the Third International Neurological Congress to be held in Copenhagen, Denmark, from August 21 to 25, 1939, doubted the advisability of holding these meetings. In

97. "News and Notes," *JNMD,* 1937, *86*:123.
98. "Notes and News," *JNMD,* 1939, *90*:829.
99. Benno Muller-Hill, *Murderous Science.*
100. "News and Notes," *JNMD,* 1937, *85*:124.

response to their concern, the Danish committee responded, "That if present conditions continue there will be no question about postponement of the Congress."[101] (Denmark was invaded by the Germans on 9 April 1940.) Another notice stated, "The non-receipt by a subscriber of any European chemical or other scientific journal seriously needed as research material should be promptly reported to the American Documentation Institute."[102]

As indicated earlier, European physicians who wanted to immigrate to the United States faced serious economic problems. Some American physicians feared that they would be swamped by these newcomers and thus have their own practices diminished. An editorial in *JAMA*, which was subsequently reprinted in *JNMD*, tried to quiet those fears. The *JAMA* editorial noted that emigré physicians constituted less than 0.6 percent of the practicing physicians in the country; "Because there are more than 2,000 communities in need of immediate staffing and which cannot be supplied by our own graduates they should be allowed to enter the country."[103] Perhaps many Americans felt ambivalent about the situation in Nazi Germany. Those whose lives were not at stake found Germany an exciting place to visit. Vacationing in Berlin in 1932, a female friend wrote in a letter to Jelliffe, "Berlin is such an interesting place right now, it is hard to leave. Although foreigners may have to leave if the tension becomes too great and the lid blows off."[104] But the situation had changed by 1936, when Jelliffe responded to a request from Leland A. Alfred, an American physician who wanted to visit the better neurologic clinics in Berlin, with the observation, "Most of their better neurologists there were 'non-Nordic' and have been pushed out."[105]

Conclusion

The correspondence and writings of Smith Ely Jelliffe, an American neurologist, psychiatrist, and editor of a major medical journal, shows how one individual responded to the trying times of the 1930s. In 1933, when Hitler and the Nazi Party came to power in

101. "Notes and News," *JNMD*, 1939, *90*:293.
102. "News and Notes," *JNMD*, 1939, *90*:829.
103. "News and Notes," quoting from *JAMA*, 1940, *114*:1068—1073. *JNMD*, 1940, *92*:421–422.
104. Gladys V. Swackhammer to Jelliffe, 25 January 1932. LC Box #17.
105. Leland A. Alfred to Jelliffe, 8 July 1936. Jelliffe to Alfred, 16 July 1936. LC Box #7.

Germany, non-Aryan and politically controversial physicians were forced to flee for their lives. Many of them attempted to immigrate to the United States. In doing so, they faced two basic hurdles, one economic and the other political: the Depression affected both institutions and individuals and many physicians viewed these immigrants as potential rivals. American policy had established immigration quotas that varied with the country of origin, reducing the possibility of absorbing large numbers of people from any one nation. In the face of these problems, Jelliffe extended himself in many ways. He wrote dozens of letters of recommendation, support, and encouragement — often a tedious and time-consuming process. However large or small his accomplishments were, the fact remains that he did save lives.

Abbreviations

JNMD . . . Journal of Nervous and Mental Disease
LC . . . Jelliffe Collection, Manuscript Division, The Library of Congress, Washington, DC
AMC . . . Alan Mason Chesney Archives of the Johns Hopkins Medical Institutions, Baltimore, MD
RFA . . . Rockefeller Foundation Archives, Pocantico Hills, NY
AP . . . Archives of Psychiatry, The New York Hospital–Cornell Medical Center, New York, NY

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An Exhibit on Schizophrenia at the College of Physicians of Philadelphia

NANCY JUERGENS

"Unlocking the riddle of schizophrenia is the single most important research goal in psychiatry today."[1] As Nancy Andreasen has noted in her book *The Broken Brain,* schizophrenia poses one of the most crucial problems facing contemporary medicine. Its costs in terms of human suffering and in terms of money spent for medical and social services are tremendous. One person in one hundred suffers from schizophrenia.[2] While its symptoms have fascinated philosophers and physicians for thousands of years, neuroscientists are still searching for the causes of, and a cure for, the disease.

In March 1989, the College of Physicians of Philadelphia presented an exhibit on the history of schizophrenia, in conjunction with the fourth annual Pennsylvania Conference on Schizophrenia, jointly sponsored by the Medical College of Pennsylvania and the Philadelphia Alliance for the Mentally Ill. The objects displayed in the exhibit were drawn from the Mütter Museum and the Historical Collections of the College of Physicians, which hold a collection unusually rich in artifacts and texts relating to neurology, neurosurgery, and psychiatry.

Philadelphia has been a hub of medical and psychiatric practice since the eighteenth century. The concentration of psychiatric facilities near universities has provided continuous opportunities for research, development, and application of innovative treatments. The exhibit told of the evolution of the care and treatment of schizophrenics over the last two hundred years, highlighting in particular the Philadelphia region. Beginning with the establishment of humane treatment of the mentally ill by Benjamin Rush at the Pennsylvania Hospital, the exhibit charted the struggle to find an adequate explanation for the disease of schizophrenia, as well as effective ways to care for and treat the mentally ill.

The concept and treatment of schizophrenia have changed greatly over the last one hundred years. Prior to 1896, when the

1. Nancy C. Andreasen, *The Broken Brain: The Biological Revolution in Psychiatry* (New York: Harper & Row, 1984), p. 53.
2. Ibid.

Transactions & Studies of the College of Physicians of Philadelphia Ser. 5, Vol. 12, No. 1 (1990); 69-92
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Figure 1: Medicine chest and gold watch of Dr. Benjamin Rush, with photograph of portrait by Edward Savage.
Courtesy of the Mütter Museum, College of Physicians of Philadelphia.

German psychiatrist Emil Kraepelin first consolidated a number of psychotic syndromes previously thought of as separate disorders under the descriptive term "dementia praecox," schizophrenia was not perceived of as a single disease process with a characteristic course and outcome.[3] Although schizophrenia is one of the most disruptive, disorganizing, and chronic of the mental illnesses,[4] its identification as a distinct disease was hindered by several factors: the nature of the disease itself, the lack of clinical experience necessary for precise description, and the tendency to attribute its symptoms to spiritual or supernatural causes.

Schizophrenia manifests itself with a variable clinical picture, with the characteristic symptoms appearing in different patterns in different people.[5] A person may present with hallucinations and delusions that are not obvious at the next moment. Many schizophrenic-like symptoms, such as ambivalence (linking opposite emotions to one idea) and mild autism (extreme self-centeredness), often appear in other types of diseases, such as depression, as well as in the normal population. Even in the 1980s, the *Diagnostic and Statistical Manual, Third Edition* allowed for a wide variation in the symptoms that must be present when the diagnosis of schizophrenia is made.[6] Therefore, it makes sense that early observers would have had trouble identifying schizophrenia as a single disease.

In addition, those observers who encountered schizophrenia before the late nineteenth century were for the most part working in isolation from others interested in mental illness. Until the 1800s, there were no large concentrations of patients in hospitals, so physicians' familiarity with schizophrenia was limited by both the small number of cases they encountered and the brief length of time they observed the symptoms. Considering these constraints, the records of observers as remote as the ancient Greeks are remarkably accurate in their descriptions of some of the symptoms of schizophrenia, including social withdrawal, hallucinations, agitation, and delusions.[7]

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3. Harold I. Kaplan, Alfred M. Freedman, and Benjamin J. Sadock, eds., *Comprehensive Textbook of Psychiatry/III, 3rd ed.* (Baltimore: Williams and Wilkins Company, 1980), p. 1105.

4. Ibid., p. 1113.

5. Andreasen, *Broken Brain,* p. 59.

6. American Psychiatric Association, *Diagnostic and Statistical Manual of Mental Diseases, 3rd ed.* (Washington, DC: American Psychiatric Association, 1980), p. 182.

7. Kaplan, *Textbook of Psychiatry,* p. 25.

Figure 2: This sketch of an insane patient at the Pennsylvania Hospital, drawn by an unknown artist for John Kearsley Mitchell while he was a resident there, suggests the increasing interest in, and respect for, individual patients that was the hallmark of moral treatment. (For a more detailed description of Mitchell's sketchbook, see the Horrocks and Eckert article in this issue of *Transactions & Studies*.)

Courtesy of the Historical Collections of the Library, College of Physicians of Philadelphia.

Throughout history, the systems developed for classifying and describing the symptoms of schizophrenia have been based on the beliefs about human nature and the causes of disease held by each society. Although often those ideas differed markedly from our current beliefs, they allowed each observer to cope more comfortably with the disturbing information presented by the afflicted. Throughout the Middle Ages and the Renaissance, lay and medical thought was dominated by superstition, magic, and religion, which interpreted individual disorder as a supernatural calamity. Mental diseases such as schizophrenia, which often manifest themselves in bizarre verbal patterns and frightening behavior, were attributed to possession by evil spirits or alienation from God.[8] By the eighteenth century, Enlightenment intellectuals were taking a fresh look at human behavior from a rationalistic point of view. They promoted benevolent attitudes toward the emotionally disturbed that were grounded in the scientific principles of observation and description. General physician and lay attitudes were slow to change, however, and the drive toward scientific observation degenerated into a compulsion to simply classify and describe isolated symptoms.[9]

By the early nineteenth century, mental illness had been classified into several loose disease categories which lacked uniformity and precision. The symptoms we now associate with schizophrenia cut across four of those disease categories: melancholia, dementia, mania, and hypochondria. A melancholic person suffered from such symptoms as anxiety, paranoia, preoccupation, withdrawal, and delusions of persecution. Dementia, sometimes called dissociation, was considered to be an acquired disorder featuring social retardation, preoccupation, stupor, and poor contact with reality. Dementia was also associated with the "inability of the mind to perform operations of reason and judgement."[10] Hypochondria was a mild form of a general disorder called "derangement," in which the sufferer experienced somatic delusions, (such as the belief that one's body had been invaded by an animal), and delusions of persecution, (such as the belief that one was being poisoned or followed). A more severe form of derangement was amenomania, which was more disturbing to observers because the ill person did not retain

8. Ibid., p. 1095.
9. Ibid., p. 44.
10. Benjamin Rush, *Medical Inquiries and Observations Upon the Diseases of the Mind* (New York: Hadner Publishing Company, 1962, reprint of 1812 ed.), p. 259.

Figure 3: Photograph of an engraving of the Pennsylvania Hospital for the Insane, taken from Earl D. Bond, *Dr. Kirkbride and His Mental Hospital* (Philadelphia: J. B. Lippincott, 1947), p. 96.
Courtesy of the Historical Collections of the Library, College of Physicians of Philadelphia.

enough reason to question the validity of the "visions" he or she experienced.[11] Mania was a catch-all category for an agitated state of "pathological anger" accompanied by visual and auditory hallucinations.[12] Although these categories are foreign to modern thinking, by facilitating detailed clinical observations of mental illness, they prepared the way for the development of a unified concept of schizophrenia at the end of the nineteenth century.[13]

Most people identified as having these mental disorders were kept at home and cared for by family members. Only when the symptoms became intolerable to others were the mentally ill placed in mental hospitals. Thus, before the twentieth century, mental hospitals contained only severely disturbed patients, many of whom, it is fair to assume, suffered from schizophrenia. Therefore, the nineteenth-century evolution of the mental hospital profoundly affected the treatment of schizophrenia. Although ideas about insanity had begun to change in intellectual circles during the Enlight-

11. Ibid., p. 135.
12. Kaplan, *Textbook of Psychiatry*, p. 37.
13. Ibid., p. 1106.

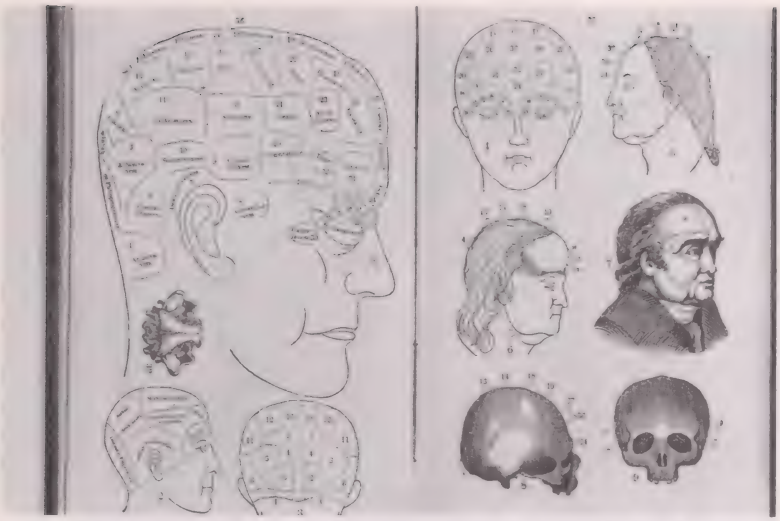

Figure 4: This chart is included in a manuscript phrenological character reading of George L. Moore as given by O. S. Fowler, dated 12 July 1841. For a later version of the diagram, see O. S. Fowler, *Practical Phrenology* (New York: Fowlers & Wells, 1854).
Courtesy of the Historical Collections of the Library, College of Physicians of Philadelphia.

enment, prior to the nineteenth century the general treatment of the insane was characterized by persistent cruelty and neglect.[14] Considered inhuman, they were often chained to walls and beaten into compliance. During the early nineteenth century, as Enlightenment ideals began to influence the general population, reformers began to agitate for a more humane approach to the mentally ill.

The most prominent American reformer of this generation was the Philadelphian Benjamin Rush (1745–1813), who is often called the "Father of American Psychiatry" (See Fig. 1). A signer of the Declaration of Independence and one of the founders of the College of Physicians, Rush was long associated with Philadelphia's Pennsylvania Hospital, the American colonies' first hospital to treat the mentally ill. Influenced by both Enlightenment philosophy and Quakerism, he developed at the hospital a "moral" treatment that emphasized the inherently good, healthy part of his patients' person-

14. Ibid., p. 32.

Figure 5: Late nineteenth-century model of vertical sections of the brain, prepared by William Fuller, M.D.
Courtesy of the Mütter Museum, College of Physicians of Philadelphia.

alities. By treating them in a secluded, healthful, and disciplined hospital setting, he hoped to break patterns of stress and physical illness induced by unhealthy home environments. Rush believed the influence of the hospital environment, including his personal intervention and kindness, would help the mentally ill to live up to their potential. Simultaneously with Philippe Pinel (1745–1826) at the Salpètriere in Paris and Samuel Tuke (1784–1857) at the York Retreat in England, Rush moderated the use of force and coercion in the management of the insane. Schizophrenics admitted to Rush's care would have enjoyed a therapeutic blend of recreation and employment in an environment designed to foster trust and tranquility. Rush's "moral" or psychological philosophy insisted on respect for the dignity and individuality of each person he treated and as such was an effective form of psychotherapy (See Fig. 2).[15]

Rush's *Medical Inquiries and Observations Upon the Diseases of the Mind*, published in 1812, was the only influential American text in psychiatry until the end of the nineteenth century.[16] In it, he described his medical theories as well as his moral treatment. Like

15. Ibid., pp. 60–64.
16. Ibid., p. 61.

Figure 6: Transorbital lobotomy being performed by Walter Freeman, M.D., in 1949.
Courtesy of the Historical Collections of the Library, College of Physicians of Philadelphia.

other early nineteenth-century physicians, Rush depended on the centuries-old Galenic medical system that conceived of illness as an imbalance in the internal bodily environment. Health depended on maintaining or restoring the bodily fluids, or "humors," to their proper balance. According to this theory, the schizophrenics admitted to the Pennsylvania Hospital were treated not only with moral treatment but also with the standard medical remedies of the day. The deranged and the manic would be given similar treatments but in different doses: they were bled, purged, given hot or cold baths, and medicated with laudanum, opium, digitalis, and valerian. Their diets were also carefully regulated. Occasionally, fear was induced in order to shock a person back to reality. Rush designed a tranquilizing chair that not only contained and calmed agitated patients, but also made it easier for him to apply medical treatments.[17]

Rush's eclectic philosophy exemplifies two recurrent themes in American psychiatry: on the one hand, he recognized that the

17. Rush, *Medical Inquiries,* p. 181.

psychoses are often the result of environmental and psychological forces; on the other hand, he was convinced that somatic physical dysfunctions are responsible for mental illnesses. Since Rush's time, there has been a dynamic tension between these views. American physicians have generally been unwilling to relinquish either somatic or psychological explanations for psychoses. Often these opposing views have come into conflict, as they did at the end of the nineteenth century, when the failures of moral treatment led to a new emphasis on scientific research and treatment of the somatic causes of mental illness.

By the 1840s, many believed the best hope for recovery from psychotic symptoms rested on the prompt hospitalization of the ill. A widening network of small private and state hospitals provided moral treatment in buildings designed specifically for that purpose (See Fig. 3). Another prominent Philadelphia physician, Thomas S. Kirkbride (1809–1883), was a major architect of nineteenth-century moral treatment. While superintendent of the Pennsylvania Hospital for the Insane, Kirkbride published a manual in 1854 on the construction and administration of hospitals for the insane which exemplifies the ideals of mid-nineteenth-century moral treatment.[18] The asylum was architecturally designed to maximize his personal influence over the small (250) patient population, and also supported his attempts to classify and separate patients on the basis of behavioral symptoms. Patients with schizophrenic symptoms were given eclectic, non-specific treatment, based on a system of amusement, exercise, reward, punishment, and regular conversation with Kirkbride himself. Kirkbride capitalized on patients' sense of class hierarchy and mental differences, hoping to evoke appropriate behavior. Disruptive and violent patients were segregated. The drug of choice for patients given medical treatments was morphine, which was used to control a broad range of symptoms, from delusions to excitement or depression. Active treatment was discontinued after six months to one year, if the patient showed no sign of improvement. Chronic patients received only simple custodial care to preserve physical health and narcotics to control noisy and disruptive behavior. Although Kirkbride preferred to use the least restrictive treatment appropriate for each patient, he occasionally

18. Nancy J. Tomes, "A Generous Confidence: Thomas Story Kirkbride's Philosophy of Asylum Construction and Management," in Andrew Scull, ed., *Madhouses, Mad-doctors and Madmen: The Social History of Psychiatry in the Victorian Era* (Philadelphia: University of Pennsylvania Press, 1981), p. 124.

Figure 7: Instruments used by Drs. Freeman and Watts to perform transorbital lobotomies.
Courtesy of the Mütter Museum, College of Physicians of Philadelphia.

resorted to physical restraints for extremely violent, life threatening behavior.[19]

Kirkbride's *Annual Reports,* aimed as much to his potential clientele and their families as to his board of managers, constituted a form of propaganda on behalf of institutional treatment. The early success of the original thirteen American asylums for the insane rested on the asylum doctors' ability to persuade society that insanity was curable if the ill were promptly placed in asylums. In fact, no other specialized treatment for mental disorders existed until the 1870s. By 1844, the asylum superintendents formalized their expertise by establishing the Association of Medical Superintendents of American Institutions for the Insane, now known as the American Psychiatric Association, which was the first medical specialty group in the United States.[20] The superintendents' marketing of asylums was so successful that aid to mental hospitals became the largest single social welfare expenditure made by state governments during the nineteenth century.[21] Between 1850 and 1889, 94 large state hospitals were constructed, many capable of holding thousands of patients, which were soon filled. The elderly poor were increasingly reclassified as senile insane by counties in order to shift financial responsibility for their care onto the states. Increased immigration further swelled the ranks of the disturbed in need of hospitalization. As patient populations grew larger and became more diverse, asylum care became increasingly impersonal. By the late nineteenth century, the ideals of moral treatment were contradicted by the realities of institutional care. Inadequate funding, inability to recruit and retain qualified staff, deteriorating buildings, and overcrowding contributed to ineffective treatment and led to the mere "warehousing" of the hopelessly mentally ill, including many schizophrenics.[22]

As the hospitals deteriorated, many physicians and lay reformers began to believe that the superintendents were ineffective, unscientific, and backward. This perception was only heightened by the superintendents' own behavior. The practice of moral treatment

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19. Nancy J. Tomes, *A Generous Confidence: Thomas Story Kirkbride and the Art of Asylum-Keeping, 1840–1883* (New York: Cambridge University Press, 1984), pp. 193–197.

20. Ibid., p. 75.

21. Gerald N. Grob, *Mental Illness and American Society, 1875–1940* (Princeton: Princeton University Press, 1983), p. 50.

22. Ibid., pp. 50–75.

had never been systematized, so it was impossible to transmit or adequately explain its principles. Asylums and their physicians remained physically and intellectually isolated from the revolution taking place in late nineteenth-century medical science. Mental hospitals had provided much needed care and support for many schizophrenics, but psychiatry as a specialty had failed to progress toward finding a cure.[23]

As psychiatry seemed to stagnate, the new discipline of neurology arose to fill the vacuum with a scientific method determined to discover the etiology of psychoses in the brain. Building on a long tradition of scientific research on the nervous system, neurologists attacked the superintendents and advanced their superior knowledge of brain anatomy and function as superior qualifications to treat the mentally disturbed. Neurologists shifted the focus almost entirely away from psychological care to somatic research and treatments of mental illness.[24]

Theories of brain localization figured prominently in the rise of neurology. Throughout history, people have located the passions or emotions in different parts of the body. During the nineteenth century, neurologists attempted to localize the seat of emotions and mental illness in the brain. One of the earliest such efforts was the "science" of phrenology, founded by the German anatomist Franz Gall (1758–1828), who correctly believed that different parts of the brain perform different functions (See Fig. 4). Unfortunately, he also felt that brain function could be deduced from bumps located by palpation of the skull. This part of his theory was quickly discredited, and most people continued to believe, until the middle of the century, that the brain functioned as a single unit.[25]

The idea of localized brain function was placed on a more scientific basis by the great Parisian neurologist, Pierre Paul Broca (1824–1880), who revolutionized the way we think about the brain. In 1861, he introduced the concept of cerebral specialization (that different areas of the brain control specific functions) and cerebral dominance (that the two halves of the brain perform different and

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23. Barbara Sicherman, *The Quest for Mental Health in America 1880–1917* (New York: Arno Press, 1980), pp. 19– 24.

24. Bonnie Ellen Blustein, " 'A Hollow Square of Psychological Science': American Neurologists and Psychiatrists in Conflict," in Scull, *Madhouses, Mad-doctors and Madmen* (Philadelphia: University of Pennsylvania Press, 1980), p. 245.

25. Andreasen, *Broken Brain,* p. 87.

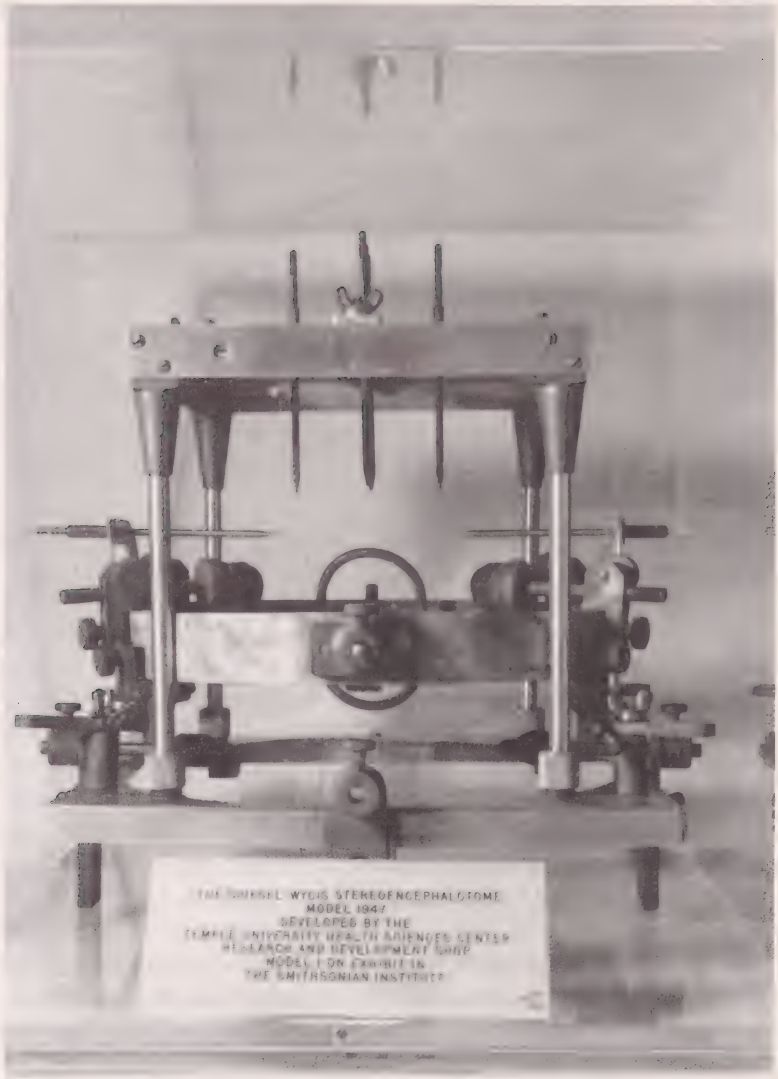

Figure 8: The Spiegel-Wycis stereoencephalotome (1947).
Courtesy of the Mütter Museum, College of Physicians of Philadelphia.

complimentary functions).[26] Broca also concluded that the anterior lobes of the brain are responsible for controlling "higher functions" such as "judgement, compassion, reflection, invention and above all the faculty of abstraction," in other words, the very functions disturbed in schizophrenia (See Fig. 5).[27]

In Philadelphia, the tradition of neurological research was firmly established by William W. Keen (1837–1932) and S. Weir Mitchell (1829–1914), both Fellows of the College of Physicians. Keen and Mitchell collaborated on the classic monograph *Gunshot Wounds and Other Injuries of the Nerves* in 1864 after treating the devastating neurologic wounds sustained by combatants in the American Civil War. Keen, a distinguished professor of surgery at Jefferson Medical College in Philadelphia, was one of the first brain surgeons in the United States. His neurologic research included the use of stimulating electrodes during brain surgery to determine the function of different cerebral cortical regions.[28] These demonstrations of cerebral localization supported the idea that mental illness was caused by organic brain lesions rather than imbalanced bodily humors.[29]

Mitchell, who was president of the College of Physicians from 1886 to 1888, was an outspoken critic of the isolation of American psychiatry from medical research. His 1894 address to the A.P.A., then known as the American Medical Psychological Association, formally challenged psychiatrists to conduct research and to establish clinics, institutions, and hospitals for the training of researchers and physicians.[30] Mitchell's career demonstrates the flexibility of nineteenth-century boundaries between psychiatry, with its psychological approach, and neurology, with its somatic approach. A well-qualified neurologist, Mitchell also treated cases of "nerves" or emotional problems. In 1884, he introduced a popular "rest cure" for the treatment of neurotic symptoms in women, which consisted of isolation from family, quiet, diet, and massage,[31] the same range of treatments available in the best asylums.

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26. Ibid., p. 87–88.

27. Eliott S. Valenstein, *Great and Desperate Cures: The Rise and Decline of Psychosurgery and Other Radical Treatments for Mental Illness* (New York: Basic Books, 1968), p. 89.

28. Ibid., p. 122.

29. Grob, *Mental Illness and American Society*, p. 42.

30. Sicherman, *The Quest for Mental Health*, p. 250.

31. Elaine Showalter, *The Female Malady: Women, Madness and English Culture, 1830–1980* (New York: Penguin Books, 1985), p. 138.

In spite of the neurologists' challenge, the issue of who was more qualified to treat mental patients could not be easily settled in the late nineteenth century. Neither neurologists nor asylum superintendents had standardized classification of mental disorders; nor could they distinguish the characteristic symptoms or processes of schizophrenia.[32] Similarly, they were unable to differentiate mental disease from other, organic diseases that manifest themselves as mental dysfunction.

Identifying schizophrenia as a separate syndrome was complicated by the presence of other disorders that feature schizophrenic-like symptoms as part of their disease picture, particularly pellagra, syphilis, and temporal lobe epilepsy. Pellagra, a niacin deficiency found in populations with a high dietary intake of corn, has a typical skin lesion in addition to schizophrenic-like symptoms. As late as the 1930s, 19 percent of the patients in North Carolina's State Hospital in Goldsboro were diagnosed as having pellagra. Temporal lobe epilepsy greatly resembles schizophrenia in its disturbances of affect, thought, perception, and behavior. The great neurologist Hughlings Jackson once suggested that "understanding the dreamy state of temporal lobe epilepsy would be the key to the understanding of insanity." Syphilis, "the great imitator," was at one time probably responsible for at least 10 percent of all admissions to mental hospitals. By 1913, Hideyo Noguchi and Joseph W. Moore had isolated the treponema pallidum bacterium and proved that the disorder "general paresis of the insane" was a manifestation of the end stage of syphilis. Scientists were to use syphilis as a prototype for research and development, hoping to find a single causative factor as well as a single cure for mental illness in general, and schizophrenia in particular.[33]

American physicians were further hampered in understanding schizophrenia by the isolation of mental patients and their caretakers in asylums removed from the university-based medical research centers. In Germany, by contrast, mental patients were housed within the university research centers, creating conditions ideal for innovation and discovery. Two of the major theories shaping modern psychiatry, Kraepelin's organic brain psychiatry and Freud's psychodynamic theory, originated there.

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32. Kaplan, *Textbook of Psychiatry,* p. 1105.
33. Valenstein, *Great and Desperate,* p. 28.

In 1896, Emil Kraepelin (1855–1926), the founder of the modern system of psychiatric classification, synthesized the idea of a "new" disease by grouping a variety of previously described psychotic syndromes under the name "dementia praecox," that is, mental deterioration that begins at an early age. Kraepelin conceptualized mental illness as an organic process of the brain rather than a simple conglomeration of symptoms. By following large groups of patients over many years, he discovered one group recovered after a short illness in which they exhibited euphoria with increased energy, or depression with decreased energy (the disease pattern we now term manic-depressive or bi-polar affective disorder). The other group did not recover and exhibited delusions, hallucinations, and confusion. Kraepelin found that those patients suffering from dementia praecox deteriorated slowly over time, until they became completely incapacitated. Kraepelin's laboratory in Heidelberg was a sophisticated neurological research center where over 50 distinct regions of the cortex were correctly identified. His map of cortical regions is still used by neuroscientists.[34] Kraepelin believed that the gross anatomy of his day would give way to a refined technology capable of revealing minute structures and functions not visible to his generation, a prediction fulfilled by recent neurological research. Neuroscientists have built on his example by searching for the causes of schizophrenia in the structure of the brain.[35]

In 1911, Eugene Bleuler (1857–1939) coined the word "schizophrenia" to replace Kraepelin's term, dementia praecox. Bleuler conceptualized the disease as a split in the mind that crippled a person's ability to integrate emotions and intellect. He arranged schizophrenic symptoms into a hierarchy of primary symptoms (disturbances of affect, association, and volition) and secondary symptoms (hallucinations, delusion, negativism, and stupor), and also coined the terms ambivalence and autism, two important symptoms of schizophrenia. Bleuler was influenced by Adolph Meyer in America, and like Meyer, he came to believe all the symptoms of schizophrenia were meaningful expressions of both the patient's biology and his psychological history.[36] Bleuler disagreed with Kraepelin about the prognosis of schizophrenia, recognizing that

34. Andreasen, *Broken Brain*, p. 128.
35. Ibid., p. 27.
36. Kaplan, *Textbook of Psychiatry*, p. 1094.

schizophrenics did not always deteriorate.[37] Unfortunately, it was Kraepelin's strict somaticism and pessimism that were to enter mainstream medical and lay thinking about schizophrenia.

The 1920s and 1930s were a transitional period in the history of mental illness, characterized by diversified, but fragmented, research and development. Psychiatric research ranged broadly across all the systems of the body and included investigations of brain pathology, autointoxication, blood chemistry, endocrine disorders, immunologic malfunctions, heredity, and the role of focal infections in causing mental illness. It was during the 1920s that Freudian psychodynamic theory first began to reach the mainstream of American medical and psychiatric thinking as well.

Although Kraepelin's somaticism dominated early twentieth-century thinking about schizophrenia, his consideration of patients as unique individuals suffering from disease processes helped to prepare the way for Freud's psychologically oriented dynamic psychiatry.[38] Sigmund Freud (1856–1939) was trained as a neurologist, but found many of his private patients complained of mental and physical symptoms that had no organic basis. Hoping to map the functions of the mind, rather than the anatomy of the brain, Freud developed a psycho-dynamic theory that emphasized psychological functioning of individuals rather than organic dysfunction of the brain.[39] His early attempts at psychoanalysis, or "talking cure," were mainly used to treat neuroses; Freudian theory was not applied to the treatment of schizophrenia until the 1940s.

In the meantime, scientists, using the model of general paresis of the insane, continued to search for one specific organic cure for schizophrenia. Between 1917 and 1938, shock treatments were introduced as therapies for schizophrenia. Often discovered by accident, and sometimes based on false premises, these treatments used insulin or electricity to induce comas and convulsions that effectively relieved some of the symptoms of acute schizophrenia. (Electroconvulsive therapy, or ECT, is still considered a useful form of treatment for some forms of depression.) These organic therapies were introduced at a time of great desperation and pessimism about the prognosis of schizophrenia. State mental hospitals were extremely overcrowded; the condition of the patients seemed utterly

37. Ibid., p. 1106.
38. Grob, *Mental Illness and American Society,* p. 112.
39. Andreasen, *Broken Brain,* pp. 12–13.

hopeless. The promise these somatic therapies held was the termination of attacks of psychosis and the induction of rapid remissions.[40]

Philadelphia physicians were particularly involved in the development of psychosurgery, a highly controversial treatment method introduced in 1936 by Egas Moniz, who won the 1949 Nobel Prize in Medicine for its development. The concepts and techniques of frontal lobotomy (a surgical incision in the frontal lobes of the brain) were used extensively after 1942 by Walter Freeman, William W. Keen's grandson, and James Watts, America's leading advocates and practitioners of lobotomy (See Figs. 6 and 7).[41] They reported encouraging remissions of psychotic symptoms among chronic schizophrenics. Several groups of physicians worked toward minimizing the damage done to the intellectual centers by lobotomy. Ernest A. Spiegel and Henry Wycis of the Temple University School of Medicine used a stereoencephalotome (a guiding instrument for stereotaxic brain surgery), making it possible to produce small, well-localized electrolytic lesions in the brain, and damage less tissue than the standard lobotomy (See Fig. 8).

Between 1946 and 1949, the number of lobotomies performed rose from five hundred to five thousand per year. Fifty six percent of all lobotomies were performed in state mental hospitals,[42] but the operation never relieved overcrowding of chronic schizophrenics in back wards, as its inventors had hoped. Lobotomy was found to cause severe, permanent personality deficits and was eventually discredited. Yet psychosurgery brought psychiatry closer to the mainstream of medicine, and facilitated interdisciplinary cooperation among psychiatrists, neurosurgeons, neurologists, and psychologists, cooperation that was rare in psychiatric practice before World War II.[43]

Interdisciplinary cooperation among medical and non-medical mental health professionals was the exception rather than the rule prior to World War II. However, a few progressive physicians and hospitals recognized the value of integrating all available therapies and research techniques, and of developing new services as needs were identified. Creative and innovative in their thinking, these

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40. Valenstein, *Great and Desperate*, pp. 45–61.
41. Fullinwider, *Technicians of the Finite*, p. 158.
42. Valenstein, *Great and Desperate*, p. 174.
43. Jack David Pressman, "Uncertain Promise: Psychosurgery and the Development of Psychiatry in America, 1935–1955," (PhD. Dissertation, University of Pennsylvania, 1986), p. 21.

individuals and institutions inspired a whole generation of psychiatrists and transformed American psychiatric practice. Their vision and drive laid the ground work for efficient, broad-based community mental health services after World War II. Outstanding in this respect were two Philadelphia physicians, Earl Bond (1878–1968) and Edward Strecker, (1887–1959) who worked at the Pennsylvania Hospital's Department of Nervous and Mental Disease (formerly the Pennsylvania Hospital for the Insane).

Bond and Strecker were both trained in the tradition established by Adolph Meyer (1866–1950), the most influential American psychiatrist of his generation. Meyer, who visited Kraepelin's laboratory for six weeks in 1896, the year he identified dementia praecox, became the conduit through which new German ideas on the diagnosis and treatment of mental illness reached American psychiatry. Although Meyer championed a scientific approach to psychiatry throughout his career, he rejected dogmatic adherence to any single theory, believing biological, environmental, behavioral, and psychological factors all influenced the development of an individual's mental illness. Meyer transformed the case history from a simple listing of symptoms into extensive charts recording all pertinent information regarding the patient's history, habits, and course of illness. His meticulous record keeping revealed maladaptive patterns of life that led to mental illness.[44]

Meyer firmly believed that effective care for the mentally ill depended on active scientific and clinical research performed in a university setting that offered easy access to a patient population. Rather than simply reject the deplorable conditions of mental hospitals, Meyer advocated that they be located at the site of psychiatric education and research, as was the German practice. Meyer spent much of his career working toward this goal. From 1913, when he became the first director of the Phipps Psychiatric Clinic at Johns Hopkins University, Meyer established postgraduate study for physicians that eventually became psychiatric residencies. Under his leadership, the clinic attained a national reputation as a research and training center.[45]

Working in the same progressive spirit that inspired Meyer, Earl Bond and Edward Strecker brought psychiatric education to a new level in Philadelphia. Bond and Strecker established a major

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44. Grob, *Mental Illness in American Society,* pp. 114– 115.
45. Ibid., p. 153.

university-based training and research center by affiliating the Pennsylvania Hospital's Department of Nervous and Mental Disease with the University of Pennsylvania. Under their leadership, Pennsylvania Hospital developed the first fully supported, formally organized fellowship in neuropsychiatry. They subsequently started a three-year residency training program in 1932 that trained more post-World War II psychiatric leaders than any other program in the United States.[46]

Bond sought a closer relationship with the mainstream medical profession, but he also worked to broaden the scope of mental health care to include the contributions of other professional groups. Like Meyer, Bond and Strecker were willing to try anything to help their patients, and sought successfully to integrate somatic and psychological theories in their practices. Bond was originally trained as a pathologist and Strecker as a neurologist, and they both continued research in the physical sciences throughout their careers. After one of their residents, Kenneth E. Appel (1896–1979), brought news of Manfred Sakel's (1900–1957) insulin therapy, which had produced encouraging results with recently diagnosed cases of schizophrenia, Bond and Strecker experimented with it on cats and refined the techniques before using it to treat their patients.

Especially important were their longitudinal studies of recovery rates among schizophrenics. Bond's most famous paper, "Underestimation of Good Results in Mental Disease," published in 1925, compared the prognosis of psychiatric patients favorably with the prognosis of general patients entering regular medical hospitals.[47] This paper, along with Strecker's 1924 paper, "An Analysis of Recoverable Dementia Praecox Reactions," placed them in the company of Bleuler and Freud in turning psychiatry from its recent pessimism to a well-founded optimism about the prognosis of mental illness.[48]

Bond further stimulated optimism in psychiatry when, in 1930, he established the first "open" psychiatric hospital, the Institute of Pennsylvania Hospital, for the treatment of neurotics.[49] Bond and Strecker broadened the services they offered by sending Kenneth

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46. Kenneth E. Appel, "Memoir of Edward A. Strecker 1887 — 1959," *Transactions & Studies of the College of Physicians of Philadelphia,* 1960, *28*:52.

47. Kenneth E. Appel, "Memoir of Earl Danforth Bond 1878 — 1968," *Transactions & Studies of the College of Physicians of Philadelphia,* 1970, *38*:114.

48. Ibid., p. 115.

49. Ibid., p. 113.

Appel to be psychoanalytically trained by Otto Rank, one of Freud's proteges who later broke with his teacher. Appel became the first classically trained psychoanalyst on a hospital staff in the United States, and he subsequently made the Institute of Pennsylvania Hospital a major psychoanalytic training center.[50]

World War II had an immense impact on the practice of psychiatry in the United States by highlighting the occurrence of war-induced mental illness in an otherwise "normal" population. The Veterans Administration, in order to treat the large numbers of service men suffering from mental illness, established well-funded, comprehensive treatment programs. After the war, William C. Menninger and a group of "young Turks" formed the Group for the Advancement of Psychiatry, which worked to improve the psychiatrist's image within the medical profession and the larger community.[51] They encouraged the use of short-term, manpower saving treatments, such as group therapy and outpatient clinics, and were particularly interested in making treatment of mental illness more accessible to the general public.

Kenneth Appel took advantage of his position as president of the American Psychiatric Association in 1953–1954, to fulfill a long standing dream.[52] Under his leadership, the United States Joint Commission on Mental Illness and Health was established by the federal government to study the national system of mental health care, and to make recommendations about improving it. In February 1963, as a result of Appel's efforts, John F. Kennedy issued a presidential message entitled "Mental Health and Retardation," the first time in American history that a President addressed any aspect of health.[53] These post-World War II developments helped reduce the stigma attached to mental illness.

Another post-World War II development that radically altered the practice of psychiatry and the treatment of schizophrenia was the introduction of new forms of drug therapy. While medications ranging from opiates to barbiturates had long been used to treat the mentally ill, the first specific medication for the treatment of

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50. Lauren H. Smith, "Earl Danforth Bond 1887–1968," *American Journal of Psychiatry,* 1968, *128*:1260.

51. Daniel Blain, "Twentieth-Century Psychiatry–Living History in the Life of Kenneth Appel, M.D., 1896–1979," *American Journal of Psychiatry,* 1980, *134*:152.

52. Ibid., p. 150.

53. Ibid., p. 153.

schizophrenia, chlorpromazine, known commercially as thorazine, was developed in 1952 by Jean Delay and Pierre Deniker. This new antihistamine had the advantage of calming agitated psychotic patients without affecting consciousness or requiring ever higher doses, as did opiates and barbiturates. Administered over a period of time, chlorpromazine was found effectively to treat the devastating symptoms of agitated schizophrenia.[54] With the arrival of chlorpromazine, the practice of lobotomy ground to a halt. Psychotherapy, formerly found successful only with the neurotic, was now tried with the calmer psychotic patient. The numbers of patients in mental hospitals decreased by 50 percent over the next 20 years, and the general atmosphere of psychiatric hospitals improved remarkably.

The decades of the 1970s and 1980s have fulfilled Kraepelin's prediction that the neurosciences would become increasingly sophisticated. The success of chlorpromazine stimulated neuropharmacological research and the development of new drugs, as well as research in all the neurosciences.[55] The hope of finding better diagnostic tools and treatments spurred innovation. By the 1970s, scientists had developed Computerized Axial Tomography and Nuclear Magnetic Resonance, both high-resolution imaging techniques. With these technologies, researchers are attempting to link anatomical abnormalities to the different symptoms of schizophrenia. Some schizophrenics show a disturbance in the limbic system, but this is not a universal finding.[56] Neuroscientists are currently using the highly experimental techniques of Regional Brain Flow studies and Position Emitting Tomography to watch the brain at work. By observing the brain function of schizophrenics, scientists hope to understand the relationship between neuro-transmitter and neuro-receptor functioning, and human thoughts, feelings, and behaviors.[57] With increased knowledge, scientists hope to refine the classification of mental illness, perhaps separating out several diseases from the general heading of schizophrenia.[58] With improved technologies, the decrease in stigmatization, and the collaborative efforts of professionals and the public, there is renewed hope that a cure

54. Andreasen, *Broken Brain*, p. 192.
55. Ibid., p. 211.
56. Ibid., p. 170.
57. Ibid., p. 164.
58. Ibid., p. 160.

for one of humankind's most ancient and devastating diseases may be in sight.

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Manuscript Resources in Neurology, Neurosurgery, and Psychiatry in the Historical Collections of the Library of the College of Physicians of Philadelphia

THOMAS A. HORROCKS
JACK ECKERT

In 1863, Surgeon General William A. Hammond (1828–1900) ordered the establishment of an army hospital for nervous diseases. This facility, which became known as Turner's Lane Hospital, was erected on what was then a country estate near Twenty-second Street and Columbia Avenue in Philadelphia. It was here that a young Philadelphia physician began his pioneering studies on nerve injuries. Seven years after the founding of Turner's Lane, the first neurological hospital in the United States was opened in Philadelphia, and the physician in charge was the same young man who had conducted those notable investigations at the army hospital. The young doctor, Silas Weir Mitchell (1829–1914), was soon to become one of Philadelphia's most celebrated figures. Mitchell's papers, including his case notes from his Turner's Lane studies, and the archives of the Philadelphia Orthopaedic Hospital and Infirmary for Nervous Diseases, can be found in the leading repository for the history of Philadelphia neurology (as well as neurosurgery and psychiatry), the Historical Collections of the Library of the College of Physicians of Philadelphia.

The extensive holdings of the Historical Collections include a rich assemblage of books and manuscripts in the fields of neurology, neurosurgery, and psychiatry, extending beyond the contributions of Philadelphia. Since a detailed survey of the department's collections in these fields is beyond the scope of this essay, only the manuscript resources relating to the history of these specialties will be highlighted. The manuscript holdings of the Historical Collections have grown considerably over the past decade, particularly in the areas of neurology and neurosurgery. As a result, the department now houses one of the finest collections of its kind in the United States.

Transactions & Studies of the College of Physicians of Philadelphia Ser. 5, Vol. 12, No. 1 (1990); 93-101
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Figure 1: S. Weir Mitchell's clinic at the Philadelphia Orthopaedic Hospital and Infirmary for Nervous Diseases, 1902.
Courtesy of the Historical Collections of the Library, College of Physicians of Philadelphia.

A pioneer neurologist and a popular novelist, S. Weir Mitchell was a dominant figure in the scientific, social, and cultural life of Philadelphia from the 1880s until the time of his death in 1914. The doyen of the city's medical profession, Mitchell was one of only two physicians to be elected president of the College of Physicians for more than one term.[1] It is thus appropriate that the bulk of Mitchell's personal and professional papers are in the Historical Collections of the Library, for he was probably the most celebrated Fellow in the College's history.[2]

Included in the Mitchell Papers are manuscript reports, speeches, articles, poems, and letters to and from Mitchell relating

1. The only other physician to be elected president of the College of Physicians of Philadelphia for more than one term was Jacob Mendez Da Costa, 1884–1886 and 1895–1897. Mitchell's terms as president were 1886–1888 and 1892–1894.

2. A large collection of Mitchell papers has recently come to light, and the College is in the process of trying to acquire them. See the editorial in this issue of *Transactions & Studies* for more information.

to his medical and literary careers. There are more than 150 letters of such notable figures as William A. Hammond, William Osler (1849–1919), John Shaw Billings (1838–1913), James Paget (1814–1899), D'Arcy Power (1855–1941), John Hughlings Jackson (1834–1911), James Madison Taylor (1855-1931), and Andrew Carnegie (1835–1919). As indicated above, Mitchell's case reports and follow-up studies, many in his hand, from his Turner's Lane investigations are in the Historical Collections. Mitchell's years at Turner's Lane Hospital were important ones, for it was at this Civil War facility that he began his distinguished career in neurology. With the assistance of Drs. George Morehouse (1829–1905) and W. W. Keen (1837– 1932), Mitchell carried out significant investigations into gunshot wounds and peripheral nerve injuries.

In recognition of the relationship that commonly exists between physical deformity and diseases of the nervous system, the managers of the Philadelphia Orthopaedic Hospital created a department of nervous diseases in 1870. Mitchell was put in charge of the department and was assisted at various times by a number of young men who would later become quite prominent in neurology and other fields: William Osler, Wharton Sinkler (1845–1910), Francis X. Dercum (1856–1931), Charles K. Mills (1845–1931), Charles W. Burr (1861–1944), and S. Weir's son, John Kearsley Mitchell (1859–1917). The first neurological hospital in the United States, the Orthopaedic Hospital and Infirmary for Nervous Diseases was an active teaching facility until it was absorbed by the University of Pennsylvania in 1938 (See Fig. 1). The Historical Collections of the Library own the hospital's archives, which include its constitution, by-laws, minutes of the various committees, case records and histories, and financial records. Consisting of more than 120 volumes, the archives of the Philadelphia Orthopaedic Hospital and Infirmary for Nervous Diseases document the history of the institution from its founding in 1867 to its merger with the University of Pennsylvania.

The Historical Collections also contain the archives of the Philadelphia Neurological Society, which was founded in 1884 by Drs. Mills, Sinkler, Dercum, and Jeremiah T. Eskridge (1848–1902). The society's archival records cover the first 60 years of its existence, and reflect not only the significant neurological research that was going on in Philadelphia, but the growth and changes that occurred in American neurology. Of the four founders of the Neurological Society, Mills was the driving force behind its creation,

Figure 2: Charles Harrison Frazier.
Courtesy of the Historical Collections of the Library, College of Physicians of Philadelphia.

hosting the organization's first meeting in his office. Mills, who established the neurology department at Philadelphia General Hospital (1877), wrote a widely-acclaimed textbook (1898),[3] and first described unilateral progressive ascending paralysis, or "Mills' disease," was elected President of the Society in 1893, 1896, and 1914. In addition, three volumes of letters written to Mills between 1893 and 1929 by many eminent American and European neurologists, including Joseph F. F. Babinski (1857–1932), Santiago Ramon y Cajal (1852–1934), Victor Horsley (1857–1916), Dercum, and S. Weir Mitchell, are found in the Historical Collections of the Library.

Other prominent neurologists who served the Philadelphia Neurological Society as president, apart from Mills and S. Weir Mitchell (who was, naturally, the Society's first President), include Daniel J. McCarthy (1874–1958), Charles Harrison Frazier (1870–1936), Francis C. Grant (1891–1967), Robert A. Groff (1903–1975), and Ernest A. Spiegel (1895–1985). The papers of all of these important figures in American neurology and neurosurgery are in the Historical Collections.

Charles Harrison Frazier, John Rhea Barton Professor of Surgery at the University of Pennsylvania from 1922 to 1936, was one of the pioneers of American neurosurgery (See Fig. 2). It was during his year in Berlin studying with Ernst von Bergmann (1836–1907) that Frazier developed an interest in neurosurgery. Upon his return to the United States, Frazier devoted his career almost exclusively to the specialty, making a number of significant contributions. Working with William Spiller (1863– 1940), professor of neurology at the University of Pennsylvania, Frazier demonstrated that the pain of trigeminal neuralgia could be relieved by intracranial neurotomy (cutting of nerves within the cranium). He was also involved with important studies on peripheral nerve injuries and modified the operative technique of cordotomy (the interruption of the lateral spinothalamic tract of the spinal cord, usually in the anterolateral quadrant). All of Frazier's work in these and other areas can be followed in his papers, which consist of 62 cubic feet of correspondence, drafts of addresses and articles, and clinical records. This large collection covers Frazier's career from 1900 to 1936.

The correspondence and clinical records in the Francis C. Grant Papers document the years 1921 through 1957, from the time that

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3. Charles K. Mills, *Nervous System and Its Diseases* (Philadelphia: Lippincott, 1898).

Figure 3: Daniel J. McCarthy; artist unknown.
Courtesy of the Historical Collections of the Library, College of Physicians of Philadelphia.

Grant was Frazier's chief assistant at the University of Pennsylvania to his tenure as professor of neurosurgery there. Like the Frazier Papers, the Grant collection is a large one (45 cubic feet in volume). Both collections appear small, however, when compared to the Robert Groff Papers, which measure 107 cubic feet. Groff was a resident under Frazier at the University of Pennsylvania and became professor of neurosurgery there in 1957. He was also neurosurgeon to a number of hospitals, including the Graduate Hospital. The Groff Papers consist of his clinical records from 1936 to 1975. Collectively, the Frazier, Grant, and Groff papers are an invaluable resource, for they document the development of American neurosurgery during the first seven decades of this century.[4]

In 1985, the Historical Collections acquired the papers of the eminent Philadelphia neurologist Ernest A. Spiegel, and those of his wife and collaborator, Mona Spiegel-Adolf (1893–1983), who was a biochemist. Spiegel, who received his medical degree from the University of Vienna in 1918 (Spiegel-Adolf received her degree from the University the same year), came to the United States in the 1930s to head the new Department of Experimental and Applied Neurology at Temple University. He later achieved international recognition as the creator of the stereoencephalotome (a guiding instrument used in stereotaxic surgery within the brain), which he pioneered with Temple neurosurgeon Henry T. Wycis (1911–1972) in 1947. (See Fig. 8 in the Juergens article of this issue for a picture of the device.) In 1966, Spiegel and Spiegel-Adolf, who was noted for her study of chemical abnormalities in brain lipids associated with Tay-Sachs disease, went on to the National Parkinson Foundation in Miami, Florida. There they assumed the positions of research director and associate director in charge of biochemistry, and continued their research on L-Dopa and its use in Parkinson's disease. In addition to documents concerning this work, one can find in the collection research notes and correspondence relating to Spiegel's many publications and the two journals that he edited, *Confinia Neurologica* (now published as *Applied Neurophysiology*) and *Progress in Neurology and Psychiatry,* which he founded in 1945.[5]

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4. In view of certain restrictions, researchers wishing to consult patient record material in the Historical Collections should first contact the Associate Librarian for Historical Collections, or the Curator of Archives and Manuscripts.

5. For a more detailed description of the Spiegel Papers, see Gail E. Farr, "Exploring the Borderlands of Neurology: The Spiegels of Philadelphia," *Fugitive Leaves from the Historical Collections,* 1988, 3(2):1–4.

While not as extensive as the neurology/neurosurgery collections, the psychiatry holdings of the Historical Collections include a number of important resources. The oldest manuscript in the department relating to psychiatry is a volume of Benjamin Rush's lectures on the mind. Rush (1745–1813) has been called the "father of American psychiatry" because of his advocacy of humane treatment for the insane. These lectures, undated, reveal his thoughts on insanity and his ideas regarding its treatment. The Historical Collections also own fragments, dating from the early nineteenth century, of Rush's notes relating to mental disorders. These notes were probably collected by Rush during the research for his book, *Medical Inquiries and Observations, Upon Diseases of the Mind* . . . (Philadelphia, 1812).

A fascinating manuscript in the Historical Collections is a volume of drawings of insane patients from the Pennsylvania Hospital drawn by an unknown artist and compiled by John Kearsley Mitchell (1793–1858), who was the father of S. Weir Mitchell. These drawings in pencil (one of which is reproduced as Fig. 2 in the Juergens article) were compiled by Mitchell during the period from 1827 to 1834, when he was on the staff of the hospital. The small volume of drawings was donated to the College in 1891 by S. Weir Mitchell.

Charles W. Burr, one of Mitchell's many assistants at the Orthopaedic Hospital and Infirmary for Nervous Diseases, was appointed professor of psychiatry at the University of Pennsylvania in 1901. Burr was an eminent psychiatrist as well as a neurologist, and his appointment marks the University's recognition of psychiatry as a separate discipline. A volume of Burr's lectures on mental diseases, taken by Edward Bell Krumbhaar (1882–1966) in 1907–1908, is owned by the Historical Collections.

Like Burr, Daniel J. McCarthy assisted Mitchell at the Orthopaedic Hospital (See Fig. 3). Upon the completion of his duties at the Hospital, he went abroad and studied neurology in Leipzig, Berlin, Vienna, and Paris. He soon earned an international reputation in neurology and psychiatry. During World War I, McCarthy was commanding officer of Base Hospital No. 115 in France and the consulting neurologist for the district. In the 1920s, he organized and led the Mental Hygiene Committee of Pennsylvania. McCarthy's papers in the Historical Collections include his case records from his World War I service.

One other collection relating to psychiatry deserves mention: the voluminous records of the Philadelphia Committee for the Clinical Study of Opium Addiction, which cover the years 1925 to 1929. These 35 volumes refer to psychiatric studies of more than eight hundred patients from New York, Philadelphia, and other cities, who were admitted to the narcotic wards of Philadelphia General Hospital. These records were donated to the College in 1930 by Dr. Arthur B. Light, who used them for his 1929 book, *Opium Addiction*.

The Historical Collections of the College of Physicians of Philadelphia possess unsurpassed holdings in the history of neurology, neurosurgery, and psychiatry in Philadelphia. Philadelphia's status as a leading center in the development of these medical specialties lends these collections national significance. Thus, scholars who are studying the larger history of neuropsychiatry will find the Historical Collections of the Library to be an invaluable resource. Recognizing its important holdings in these three areas, the Historical Department is committed not only to preserving its significant collections, but also to expanding them for present and future research.

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Myth, Mirth, and Madness

FRED B. ROGERS

From its earliest origins in Europe, psychoanalysis has drawn upon anthropological materials. In them one can readily discern, among other topics, those of myth, mirth, and madness. Many of the first psychoanalytic theorists were preoccupied with examining ramifications of each of these subjects. Karl Abraham perceived the relationship of *Dreams and Myths* in 1913,[1] and Ernest Jones later wrote a classic article on "The Theory of Symbolism."[2] Otto Rank early contributed *The Myth of the Birth of the Hero,*[3] and Franz Riklin described *Wish Fulfillment and Symbolism in Fairy Tales.*[4] Sigmund Freud himself wrote the controversial *Totem and Taboo,* citing resemblances between the psychic life of savages and neurotics.[5] The Hungarians Sandor Ferenczi and Geza Roheim examined folkloristic information psychoanalytically; the latter's *The Origin and Function of Culture* was a signal volume in its field.[6] These classic texts support anthropology's prominent role in psychoanalysis.

Another Hungarian depth-psychologist, George Devereux, formerly a research professor in ethnopsychiatry at Temple University School of Medicine and thereafter a visiting professor of that subject in France, also made significant contributions to cross-cultural psychiatry. Devereux's book, *Reality and Dream,* reported on the psy-

1. Karl Abraham, *Dreams and Myths: A Study in Race Psychology* (New York: Journal of Nervous & Mental Disease Publishing Company, 1913).

2. Ernest Jones, "The Theory of Symbolism," in *Papers on Psycho-Analysis,* 3rd ed., (London: Ballière, Tindall and Cox, 1923), pp. 154–211.

3. Otto Rank, *The Myth of the Birth of the Hero: A Psychological Interpretation of Mythology* (New York: Journal of Nervous & Mental Disease Publishing Company, 1914).

4. Franz Riklin, *Wish Fulfillment and Symbolism in Fairy Tales* (New York: Journal of Nervous & Mental Disease Publishing Company, 1915).

5. Sigmund Freud, *Totem and Taboo: Resemblances Between the Psychic Lives of Savages and Neurotics* (New York: Moffat, Yard and Company, 1918).

6. Weston LaBarre, "Psychoanalysis in Anthropology," in J. H. Masserman, ed., *Psychoanalysis and Social Process* (New York: Grune & Stratton, 1961), pp. 10–20.

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chotherapy of a Native American man; it included a discussion of the *vagina dentata* myth.[7] The "talking cure" was deemed successful in this case. In her preface to Devereux's book, anthropologist Margaret Mead wrote as follows:

> The growing field of community psychiatry is claiming much of the enthusiasm of young psychiatrists, members of the para-medical professions, and those young social scientists who want to apply what they have learned in books to the real situations of the urban ghetto, refugee populations, rural migrants, and sufferers from too rapid social mobility — up or down the socioeconomic scale . . . In many fields: education, community development, vocational motivation, grass roots institutions, free legal aid, technical assistance, . . . the need for answers is urgent and tools for finding answers . . . are extremely timely.[8]

In Mead's quote above we see that this prominent anthropologist recognized the growing utility of psychoanalysis.

Ancient Biblical wisdom tells us that "A merry heart doeth good like a medicine; but a broken spirit drieth the bones." (Proverbs 17:22). Mirth is a counter balance to gloom, as was noted in 1621 by Oxford don Robert Burton, in *The Anatomy of Melancholy.*[9] Two centuries later, in 1827, English poet Thomas Hood in his *Ode to Melancholy* said that "There's not a string attuned to mirth/But has its chord in melancholy."[10] In this century, psychoanalysis has contributed to a further understanding of the mind and its more subtle mechanisms. Dysphoria and irascibility have been elucidated as moods contrary to euphoria and emotional stability. (Anthropologist M. F. Ashley Montagu has whimsically termed psychoanalysis "the study of the id by the odd.")

The psychology of humor fascinated Sigmund Freud and many who have studied the subject since. His treatise *Wit and Its Relation to the Unconscious* explored humor's place in the psyche.[11] Humor,

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7. George Devereux, *Reality and Dream: Psychotherapy of a Plains Indian,* 2nd ed., (New York: Anchor Books, 1969).

8. Margaret Mead, "Preface," in Devereux, *Reality and Dream,* pp. xv–xvii.

9. Robert Burton in John Bartlett, *Familiar Quotations: A Collections of Passages, Phrases and Proverbs Traced to Their Sources in Ancient and Modern Literature,* 15th ed., Emily Morison Beck, ed., (Boston: Little, Brown and Company, 1980), p. 259.

10. Thomas Hood, "Ode to Melancholy," in Bartlett, *Familiar Quotations,* p. 485.

11. Sigmund Freud, *Wit and Its Relation to the Unconscious* (New York: Moffat, Yard and Company, 1916).

Freud observed, permits us to vent resentment at social conventions and personal restrictions. It is a great stabilizer, one of the hallmarks of maturity. We laugh at the ridiculous and the incongruous, at arrogance and pomposity. Laughter can be appropriate and inappropriate; when valid it expresses the joy of life. All wit is not sparkling, however. *Witzelsucht* (literally joking mania), for example, is a condition characteristic of frontal lobe brain lesions marked by a tendency to pun, make poor jokes, or tell pointless stories at which the patient himself is inordinately amused.[12] By contrast, medical humanist Norman Cousins of California recently employed laughter therapy — viewing old Marx Brothers, W. C. Fields, and Laurel and Hardy comic movies — to ameliorate his symptoms of ankylosing spondylitis (inflammation of the spinal joints). This unusual remedy suggested "try laffin," a tonic title coined by Dr. David J. LaFia, a neurologist formerly at the Thomas Jefferson University Hospital. In similar fashion, French writer Colette advised her readers: "Be happy. It's one way of being wise." Clearly the salutary effects of mirth are universally recognized!

Madness is a wholly tragic theme, in contrast to sanity. Psychosocial studies such as those cited by Margaret Mead in the above quote have taken many forms. For example, Millen Brand, in his novel *Savage Sleep,* depicted the direct analysis of psychotic patients such as that effected by Dr. John N. Rosen at Temple University Hospital.[13] He related the mental disorientation and unreality in schizophrenia — an "inward journey" of these people into bouts of bizarre thinking and symbolic gestures. This psychic turmoil has been analogized to a fragmented Gothic stained-glass window, dismantled without lead margins into patterns resembling a kaleidoscope. Some of the patient's paranoid ideas and hallucinations do contain a germ of meaning, however, which was cited by Swiss psychoanalyst Carl G. Jung early in this century. To this end he stated: "A personality, a life history, a pattern of hopes and desires lie behind the psychosis. The fault is ours if we do not understand them."[14] More recently, California psychiatrist John Weir Perry expounded the same thesis in his book, *Roots of Renewal in Myth*

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12. Arthur Osol, *Blakiston's Gould Medical Dictionary,* 3rd ed., (New York: McGraw-Hill Book Company, 1972), p. 1678.

13. Millen Brand, *Savage Sleep: A Novel* (New York: Crown Publishers, 1968).

14. Carl G. Jung, *Memories, Dreams, Reflections,* Aniela Jaffé, ed., (New York: Pantheon Books, 1963), p. 127.

of Psychotic Episodes.[15] In its chapters he also described the survival of archaic myth and ritual forms in the present-day psyche. Myth, mirth, and madness each find a place in human experience. Dr. Earl D. Bond of Philadelphia, in his book *One Mind, Common To All,* summed up this matter when he wrote:

> Most people are more or less normal, not altogether good or bad, right or wrong, admirable or contemptible, sane or insane . . . In half the books and magazines that we read and in every newspaper are passages which let us look, if we have attentive eyes, a little below the surface of human nature to the troubles and tragedies of the human mind.[16]

Our survey of psychoanalytic, anthropological, medical and popular literature has shown this to be the case.

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15. John Weir Perry, *Roots of Renewal in Myth and Madness: The Meaning of Psychotic Episodes* (San Francisco: Jossey-Bass Publishers, 1976).

16. Earl D. Bond, *One Mind, Common To All* (New York: The Macmillan Company, 1958), pp. 49–50.

Book List

New Books In the History of Medicine in the Historical Collections of the Library, October through December, 1989

JACK ECKERT

Joan Austoker, *A History of the Imperial Cancer Research Fund, 1902–1986* (Oxford: Oxford University Press, 1988).

Susan Baur, *Hypochondria: Woeful Imaginings* (Berkeley: University of California Press, 1988).

Lucinda McCray Beier, *Sufferers & Healers: the Experience of Illness in Seventeenth-Century England* (New York: Routledge & Kegan Paul, 1987).

Ludy T. Benjamin, Jr., *A History of American Psychology in Notes and News, 1883–1945: an Index to Journal Sources* (Millwood, New York: Kraus International Publications, 1989).

Debra Jan Bibel, *Milestones in Immunology: A Historical Exploration* (Madison, Wisconsin: Science Tech Publishers, 1988).

Robert Bogdan, *Freak Show: Presenting Human Oddities for Amusement and Profit* (Chicago: University of Chicago Press, 1988).

Alfred Jay Bollet, *Plagues & Poxes: the Rise and Fall of Epidemic Disease* (New York: Demos Publications, 1987).

Margaret N. Bussigel, Barbara M. Barzansky, and Gary G. Grenholm, *Innovation Processes in Medical Education* (New York: Praeger Publishers, 1988).

William F. Bynum, Roy Porter, and Michael Shepherd, eds., *The Anatomy of Madness: Essays in the History of Psychiatry, Volume III: the Asylum and its Psychiatry* (New York: Routledge, 1988).

John A. Callahan, Dwight C. McGoon, and Jack D. Key, *Classics of Cardiology: a Collection of Classic Works on the Heart and Circulation, Volume Four* (Malabar, Florida: Robert E. Krieger Publishing, 1989).

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Robert Castel, *The Regulation of Madness: the Origins of Incarceration in France,* W. D. Halls, trans., (Berkeley: University of California Press, 1988).

Janet Colaizzi, *Homicidal Insanity, 1800–1985* (Tuscaloosa, Alabama: University of Alabama Press, 1989).

William Coleman and Frederic L. Holmes, eds., *The Investigative Enterprise: Experimental Physiology in Nineteenth-Century Medicine* (Berkeley: University of California Press, 1988).

Roger Cooter, ed., *Studies in the History of Alternative Medicine* (New York: St. Martin's Press, 1988).

Kenneth R. Crispell and Carlos F. Gomez, *Hidden Illness in the White House* (Durham, North Carolina: Duke University Press, 1988).

Derek A. Dow, ed., *The Influence of Scottish Medicine: an Historical Assessment of Its International Impact* (Park Ridge, New Jersey: Parthenon Publishing Group, 1988).

Howard J. Faulkner and Virginia D. Pruitt, eds., *The Selected Correspondence of Karl A. Menninger, 1919–1945* (New Haven, Connecticut: Yale University Press, 1988).

Elizabeth Fee and Daniel M. Fox, *AIDS: the Burdens of History* (Berkeley: University of California Press, 1988).

Robert Mortimer Gascoigne, *A Chronology of the History of Science, 1450–1900* (New York: Garland Publishing, 1987).

Seebert J. Goldowsky, *Yankee Surgeon: the Life and Times of Usher Parsons* (Boston: Francis A. Countway Library of Medicine, 1988).

Lindsay Granshaw and Roy Porter, eds., *The Hospital in History* (London: Routledge, 1989).

Mirko D. Grmek, *Diseases in the Ancient Greek World,* Mireille Muellner and Leonard Muellner, trans., (Baltimore: Johns Hopkins University Press, 1989).

A. D. G. Gunn, *Oral Contraception in Perspective: Thirty Years of Clinical Experience with the Pill* (Park Ridge, New Jersey: Parthenon Publishing Group, 1987).

A. McGehee Harvey, Gert H. Brieger, Susan L. Abrams, and Victor A. McKusick, *A Model of Its Kind, Volume I: a Centennial History of Medicine at Johns Hopkins* (Baltimore: Johns Hopkins University Press, 1989).

A. McGehee Harvey, Gert H. Brieger, Susan L. Abrams, Jonathan M. Fishbein, and Victor A. McKusick, *A Model of Its Kind,*

Volume II: a Pictorial History of Medicine at Johns Hopkins (Baltimore: Johns Hopkins University Press, 1989).

Gregory J. Higby, ed., *One Hundred Years of the National Formulary: a Symposium* (Madison, Wisconsin: American Institute of the History of Pharmacy, 1989).

Martha L. Hildreth, *Doctors, Bureaucrats, and Public Health in France, 1888–1902* (New York: Garland Publishing, 1987).

Ralph Jackson, *Doctors and Diseases in the Roman Empire* (Norman, Oklahoma: University of Oklahoma Press, 1988).

Whitney R. D. Jones, *William Turner: Tudor Naturalist, Physician, and Divine* (London: Routledge, 1988).

Janet Kinney, *Saga of a Surgeon: the Life of Daniel Brainard, M.D.* (Springfield, Illinois: Southern Illinois University School of Medicine, 1987).

Ronald D. Mann, ed., *The History of the Management of Pain from Early Principles to Present Practice* (Park Ridge, New Jersey: Parthenon Publishing Group, 1988).

David McBride, *Integrating the City of Medicine: Blacks in Philadelphia Health Care, 1910–1965* (Philadelphia: Temple University Press, 1989).

C. A. Meier, *Soul and Body: Essays on the Theories of C. G. Jung* (San Francisco: Lapis Press, 1986).

Ronald L. Numbers and Todd L. Savitt, eds., *Science and Medicine in the Old South* (Baton Rouge, Louisiana: Louisiana State University Press, 1989).

Richard Palmer, compiler, *A Supplementary Catalogue of Western Manuscripts in the Library of the Wellcome Institute for the History of Medicine* (London: Wellcome Institute for the History of Medicine, 1989).

F. L. M. Pattison, *Granville Sharp Pattison: Anatomist and Antagonist, 1791–1851* (Tuscaloosa, Alabama: University of Alabama Press, 1987).

Vincent Quinn and John Prest, eds., *Dear Miss Nightingale: a Selection of Benjamin Jowett's Letters to Florence Nightingale, 1860–1893* (Oxford: Clarendon Press, 1987).

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Memoir of George I. Blumstein, 1904–1989

SONIA STUPNIKER

George Blumstein was born in Philadelphia on 26 November 1904, the third child of immigrant parents who arrived from Latvia in their childhood, and spent their youth doing unskilled work for minimal wages. Aaron Harry Blumstein and Sarah Deborah Lazer met in Philadelphia and were married in 1889. Aaron opened a small tailor shop in the Kensington section of Philadelphia, where he raised eight children and where the family lived in a very modest fashion for many years.

George always had a loving relationship with his parents, but he was soon more than a generation apart from them. Holding a variety of jobs obtained through ingenuity and boundless energy, George put himself through college. After completing his pre-medical education at Temple University, he went on to Temple University Medical School, graduating in 1929. Medicine offered George an opening to an exciting new world, and he entered it with an eagerness and enthusiasm that typified his entire medical career until he

Transactions & Studies of the College of Physicians of Philadelphia Ser. 5, Vol. 12, No. 1 (1990); 111-118
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died suddenly at the age of 84, on his way to medical rounds at Temple University Hospital.

After serving an internship at Mt. Sinai Hospital (later to be a part of Albert Einstein Medical Center), Dr. Blumstein joined the medical staff of both Mt. Sinai and Temple University Hospital and opened a private office for the practice of medicine. The next most auspicious event in his life occurred in 1933 when he met Molly Goldman, a bright and charming graduate of the University of Pennsylvania. George and Molly were married in 1935, and their only son was born one year later. Molly's amiable and supportive personality played an important role in Dr. Blumstein's social, as well as medical, growth and development. When they moved to Mt. Airy into a comfortable home with a lovely garden, George showed great proficiency in caring for the house, where he played the roles of gardener, electrician, plumber, and carpenter, while Molly was the gracious hostess to family, colleagues, and hospital personnel.

Dr. Blumstein, a diligent and avid reader of medical literature, participated in several journal clubs and attended all available medical lectures. Early in his professional life, he was attracted to the budding field of allergy. After being certified in both internal medicine, and allergy and immunology, he limited his medical activities to the latter branch of medicine. His zeal for knowledge was accompanied by an intentness to share it with students, residents, and Fellows. He became an instructor in medicine in 1932, and rose to be a clinical professor of medicine and immunology in 1964. At that time, he also became the chief of the Clinic of Allergy and Immunology at Temple, where he continued to work until 1975, when he became Clinical Professor Emeritus. In 1983 he received Temple's Distinguished Service Faculty Award which reflected the opinions of both faculty and students. Dr. Blumstein also attained the rank of attending in medicine and chief of allergy at Albert Einstein Medical Center, where he served as chairman of the Committee on Postgraduate Education.

Dr. Blumstein's bibliography was replete with reports of his clinical investigations in the field of allergy and asthma. Most of them were published in allergy journals, and some were written in collaboration with his son, Charles Blumstein. Because of his earnest interest in his chosen specialty and his generous contribution of time and energy, George soon became a leader in all of the various allergy organizations. In 1944 he was elected president of the Philadelphia Allergy Society, and in 1961 president of the

American Academy of Allergy and Immunology. Because of his dedicated involvement in all of the educational and structural activities of the Academy, he was given its Distinguished Service Award in 1970, and in March 1990 he will posthumously receive a Distinguished Clinician Award from the same organization.

When George Blumstein became a Fellow of the College of Physicians of Philadelphia in 1949, the College did not know what a devoted and hard working member they had acquired. For George, it was another opportunity to delve into the cultural aspect of medicine and exercise his inherent ability to deal with organizational and financial issues in medical institutions. Within a short time, the College became his favorite arena for creative ideas. He was the chairman of the S. Weir Mitchell Associates Committee, which raised the endowment supporting the library's medical periodical collection; more than two hundred journals were endowed by 1967. At that time, he was elected vice-president of the College, and served as its president from 1970–1972. The next fund raising activity in which Dr. Blumstein had a leading role was the Third Century Fund Campaign, which brought together enough money to renovate the Mütter Museum and establish the Francis Clark Wood Institute for the History of Medicine. The New Century Fund Campaign began in 1982, and thanks to George's continued efforts and innovative techniques it has been highly successful.

In 1983, on a quiet peaceful night at home, George suffered a terrifying assault during which he was cruelly beaten with considerable injury to his head and face, requiring hospitalization. But after a few weeks of sadness and depression, his resilience brought him back to his beloved occupation again. He moved into a downtown apartment, close to the College, and increased the frequency of his visits to the building. Shortly afterwards, in 1983, he became a member of a committee called "Medicine and Society," which initiated a series of lectures for the general public. These were supported by a grant from the Meyer Goldman Foundation, of which he was the executor. Eight lectures were given annually until 1986 on subjects ranging from "Various Perspectives of Aging" to "Health Care: Theirs and Ours," which presented comparisons of our health care system with that of England, China, Scandinavia, and Canada. Many other medical and ethical issues were addressed in various forms, leading to interesting and instructive discussions. Needless to say, George enjoyed the College's Bicentennial Celebration in

1987, and looked forward to participating in the newly established health policy center in the third century of the College.

George and Molly traveled extensively, usually following national and international meetings. When away from home, he always wrote warm and engaging letters to his family, including his three grandchildren, describing what he learned about life in distant parts of the world. Even taking his grandson fishing was an opportunity to share views and impressions, and to instill interest in social events. He was delighted when his oldest grandson entered medical school.

George Blumstein was a compassionate doctor, loved by his patients, and a generous cooperative worker admired by his friends and colleagues. His was the story of a long and happy life which ended on an ordinary work day, leaving a legacy of many projects accomplished and many goals to be reached.

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Memoir of Isaac Starr, 1895–1989

TRUMAN G. SCHNABEL, JR.

Isaac Starr, a distinguished Philadelphia physician, internationally recognized for his studies of the heart and peripheral circulation, died on 24 June 1989, at the age of ninety-four. He was directly descended from an officer in Cromwell's army, and the seventh consecutive Isaac to adorn the Starr family tree. One of his forbearers joined the Quakers, left Ireland for America in 1702, and settled on land purchased from William Penn near Kennett Square, Pennsylvania. On his mother's side he was related to Charles Chauncy, the second president of Harvard University, whose six sons became either ministers or physicians.

Isaac Starr was born in 1895 in Philadelphia, the son of Isaac Starr, a prosperous stock broker, and Mary Barclay Starr, who was troubled with paroxysmal atrial fibrillation (rapid irregular beating of the heart) throughout her life. Following graduation from Chestnut Hill Academy where he was well taught in science and mathematics, Starr entered Princeton University and received a bachelor of science degree *magna cum laude* in 1916. The influence of his uncle, Louis Starr, professor of pediatrics at the University of Pennsylvania, and two Princeton professors, biologist Edward Grant Conklin and physiologist E. Newton Harvey, as well as his mother's long illness, undoubtedly played a role in his decision to seek a career in medicine. At the University of Pennsylvania School of Medicine, Alfred Stengel interested him in the peripheral circulation and A. Newton Richards encouraged his research proclivities. Starr's first paper, "Progress in Undergraduate Research in Medical Schools,"[1] appeared in 1919.

After a two-year internship on the West Service of the Massachusetts General Hospital, where the clinical research carried out by Joseph Aub, Cecil Drinker, and George Minot excited him, Starr returned to Philadelphia to be an assistant instructor in Richards's Department of Pharmacology at the University of Pennsylvania, receiving an annual salary of $1,200. At first, he worked with the Richards group on mechanisms involved in the formation of urine in animals, but he soon realized that he was more interested in studying the circulation of the blood in man. The initiation of a program to teach medical residents at the University Hospital about the effects of drugs on their patients led to the appointments of Starr and Joseph Hayman as assistant professors of Clinical Phar-

1. Isaac Starr, J. Stokes, Jr., and Lyle B. Best, "Progress in Undergraduate Research in Medical Schools," *Science*, 1919, *50*:308.

macology (probably the first academic titles of this nature in the country).

During the next eight years, he divided his time between teaching and research in the Pharmacology Department and his responsibilities as an acting physician on a medical ward in the University Hospital. In 1933, Starr was appointed to the newly endowed Hartzell Professorship in Research Therapeutics. Except for a two and a half year period during World War II, when he was dean of the School of Medicine, he occupied the chair until his retirement in 1961. Named an emeritus professor, he continued to be active in his laboratory at the hospital, publishing 52 papers in the next 23 years.

Throughout his long investigative career, Starr's chief interests were the effects of drugs, operative procedures, and other therapeutic interventions on the heart and circulation. He improved old methods, and developed new ones, to gain more information about how the cardiovascular system functioned. His early studies of cardiac output and the peripheral circulation in the feet of diabetics convinced him that unregulated heat could have deleterious effects on an already compromised extremity; this insight led to the development of a thermo-regulated heat cradle. Initially, Starr used a laborious ethyl iodide method, which he had improved, to measure cardiac output. His quest for a simpler and less anxiety-producing way of studying the circulation led to the resurrection of an instrument used by Yandell Henderson, 30 years previously, to measure mass movements in the circulation of humans.

In 1939, Starr built his first instrument in Detlev Bronk's Johnson Foundation shop; he called it a ballistocardiograph. It was lighter than Henderson's instrument, and had an optical recording system. It was of low frequency and necessitated that the subject hold his breath during a recording; that requirement was eventually obviated by opposing the bed's motion with a stiff spring, which increased the apparatus's frequency. To establish the physiologic significance of measurements made with the ballistocardiograph, Starr carried out a series of cadaver studies in which cardiac output and blood pressure were recorded at each instance of systole. He concluded that his instrument measured the heart's strength by determining the forces generated with each beat, and that persistent distortion of the wave form indicated a lack of coordination in the heart's contractions. Besides studying the effects of drugs on the circulation, Starr spent 40 years collecting follow-up ballistocardio-

grams on students, friends, patients, and fellow faculty members. Analysis of the records showed a strong relationship between abnormal ballistocardiograms and later morbidity and mortality.

During World War II, while dean, Starr helped revise the curriculum of the University of Pennsylvania School of Medicine. At the same time, Starr served on the National Research Council as chairman of its Committee on Pharmacy, as secretary of its Subcommittee on Essential Drugs, and as a member of its Committee on Medical Supplies. He was also the "responsible investigator" for two projects in the Office of Scientific Research and Development, one on convalescence and the other on neurocirculatory asthenia. In addition, Starr took part in investigations in aviation medicine and the side effects of new antimalarial drugs.

After the war, Starr was a founding member of the Cardiovascular Study Section of the National Institutes of Health, and for many years chairman of the National Research Council Committee on Narcotics and Drug Addiction. He served as a member of the United States Pharmacopeia Revision Committee for 20 years, between 1930 and 1950, and of the AMA Council on Drugs for 17 years, between 1945 and 1962, acting as chairman during the last three years. Starr served on the editorial boards of both the *American Heart Journal* and *Circulation*. He was secretary and president of the American Society for Clinical Investigation, and a member of the Association of American Physicians, the American Physiological Society, the American Society for Pharmacology and Experimental Therapeutics, the Peripatic and Interurban Clinical Clubs, and numerous other scientific organizations. He became a Fellow of the College of Physicians of Philadelphia in 1927.

In October, 1977, the University of Pennsylvania held a three-day "Starr Symposium on the Failing Heart" to acknowledge his contribution to scholarship, science, and medicine, and, in 1983, the university awarded him an honorary doctor of science degree. Additionally, in recognition of his scientific contributions, Starr received the Selective Service Medal for Wartime Research, the Albert Lasker Award of the American Heart Association, the Kober Medal of the Association of American Physicians, and the Berger Medal of the Free University of Amsterdam. He was also a member of the Sigma Psi and Alpha Omega Alpha honorary societies.

Jack Starr, as his friends affectionately called him, worked hard at deciphering the intricacies of the cardiovascular system and yet still had time for some of the finer things in life. He enjoyed classical

music, especially that of Johann Sebastian Bach; he heard Bach's "B Minor Mass" many times and often sang bass in the chorale parts. For many years, he spent Sundays at the home of Henry Drinker, where the guests would sing Bach chorales. An ardent fisherman, he cast his flies in the streams of England, Scotland, Belgium, Nova Scotia, and Pennsylvania. He was an expert on the great European cathedrals, especially those of France. But most of all, he was a kind and humble man who liked nothing better than to help those who came to work with him.

His wife, Edith Nelson Page, died in 1979. He is survived by sons Isaac Jr., Harold Page, and Lynford Lardner, and a daughter, Vidal Davis. When last counted, there were 12 grandchildren and 11 great-grandchildren.

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Transactions & Studies of the College of Physicians of Philadelphia (ISSN 0010-1087) is published four times a year (March, June, September, December) by the College of Physicians of Philadelphia, 19 South 22nd Street, Philadelphia, PA 19103. Second-class postage paid at Philadelphia, PA 19104. POSTMASTER: Send address changes to *Transactions & Studies of the College of Physicians of Philadelphia,* 19 South 22nd Street, Philadelphia, PA 19103.

Subscription correspondence should be sent to the journal at the same address. Subscriptions, U.S.A. and Canada $35.00, foreign $40.00. Single copies, $10.00.

Transactions & Studies of the College of Physicians of Philadelphia is indexed in *Biological Abstracts, Chemical Abstracts,* and *Index Medicus.*

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OF THE
COLLEGE OF PHYSICIANS OF PHILADELPHIA

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MEDICINE & HISTORY

Series V Volume XII No. 2 JUNE 1990

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MEDICINE & HISTORY

Series V Volume XII Number 2 June 1990

Acknowledgments

The publication of this issue of Transactions & Studies of the College of Physicians of Philadelphia is made possible through the generosity of:

The M. Louise Carpenter Gloeckner Memorial Fund

The Morris Feld Memorial Fund

The United Hospital Fund

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TRANSACTIONS & STUDIES
OF THE
COLLEGE OF PHYSICIANS OF PHILADELPHIA
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Introduction

BRUCE C. VLADECK
DAVID J. ROTHMAN

This special report on the future of hospitals was developed by the United Hospital Fund of New York, a nonprofit research and philanthropic organization, and the Center for the Study of Society and Medicine at the College of Physicians & Surgeons of Columbia University.

The hospital is a central institution in contemporary society. Most of us were born in hospitals and a substantial, if shrinking, majority of us will die in them. The middle-aged adult who has not had at least one experience with hospitalization is unusual enough to be a subject of conversation. Not only the frequency but the intensity, emotional content, and connection to fundamental aspects of life involved in encounters with hospitals give them a very special place in the consciousness of most adults.

In more mundane terms, hospitals also have enormous economic and sociopolitical importance. By themselves, the roughly six thousand community general hospitals in the United States (a definitional category that excludes chronic-care facilities and those that specialize in the treatment of mental illness) account for more than 4 percent of the gross national product, or more than 1 out of every 25 dollars in the national economy. Hospitals directly employ more than three million persons, in addition to hundreds of thousands engaged full-time in providing goods and services to hospitals, and more than 300,000 independently entrepreneurial physicians, whose professional activities — as well as incomes — depend on the hospital.

Because more than half of hospital revenues come directly from governments, and because the demand of hospitals on public treasuries has grown so disproportionately in a period of tax cutting and economic constraint, hospitals are also increasingly a concern of public officials, if not of the general electorate, who may very well take them for granted. Politicians and bureaucrats who have had no other connection to the health care system since birth now

Transactions & Studies of the College of Physicians of Philadelphia Ser. 5, Vol. 12, No. 2 (1990); 119-125
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spend an increasing amount of their time on the growing esoteric dimensions of hospital finance and economic management.

And in a society that, for all its increasing skepticism, remains enthralled with the promises of science and technology, the hospital is still the avatar for the most dramatic and most astonishing products of contemporary research. From the artificial heart to in vitro fertilization to imaging machines driven by superconducting magnets, the very real practical expressions of this century's revolution in biomedical science occur in hospitals.

Yet, at the very time these institutions have attained the apotheosis of their growth and their importance, they have come under challenge in a way not experienced for decades. The "hospital problem" is more of a chronic condition with intermittent acute flare-ups than a unique characteristic of the last few years; still, the levels of hostility, confusion, and anger toward hospitals increasingly encountered in forums of all sorts are novel and without recent precedent. Hospitals are perceived not only as increasingly important institutions but as increasingly troubled ones, and perhaps, as well, as increasingly troublesome ones.

The current discomfort with, and confusion about, hospitals is not entirely external to the hospital community. Much of the uneasiness, ambivalence, and even hostility comes from within hospitals themselves. Thus, when prophets of gloom and doom announced, over the last decade, the end of the hospital, or at least the imminent demise of a good fraction of all of them, their words seemed to have a particular resonance for those engaged in the management, operation, and planning of hospital services.

In the early part of the 1980s, there was a particularly dramatic outbreak of both Cassandras and Jeremiahs, foretelling the impending doom of much of the nation's hospital sector, and often implying that such an event would be appropriate retribution for past sins of extravagance, pride, sloth, and bureaucracy. At a time when American hospitals were enjoying the greatest economic prosperity in their histories, combined with an extraordinary growth in their technical capacity to heal the sick and comfort the afflicted, people in the hospital business turned out in droves, and paid exorbitant fees, not only to hear themselves called all sorts of names, but also to be told with great certainty that they were engaged in an industry about to shrink, deservedly, by one-third to one-half, and about to be transformed from a network of independent, locally controlled,

largely nonprofit institutions into a handful of national franchise operations.

Such was the environment that led to the conference whose proceedings are presented in this issue of *Transactions & Studies of the College of Physicians of Philadelphia.* Skeptical of all overconfident global predictions, and fascinated by what seemed to us to be the growing gulf between perception and reality in the discussion of hospitals — and intrigued as well by hospitals themselves — we thought the time propitious to explore whether what was known about hospitals could promote a thoughtful consideration of their likely futures. It is both comforting and disconcerting to recognize that, while the process took a lot longer than expected, and that while fads in popular thinking about hospitals come and go with alarming rapidity, the products of that effort appear to be as needed today as when we began.

With the generous support of the Pew Memorial Trust, a group of us set out to examine the future of hospitals in the United States from a variety of disciplinary perspectives, and to engage hundreds of others involved with hospitals in a series of discussions around the country about the issues they raised. After a number of meetings among ourselves, we arranged four conferences — in New York, Boston, Philadelphia, and San Francisco — that were attended by hospital officials, academics, public officials, and others who shared our fascination with hospitals. That process of dialogue and interchange, which we sought out for itself and valued in itself, also helped significantly to shape the evolving papers which appear in final form in this volume.

We certainly have no question about the interdisciplinary character of our undertaking. Charles Rosenberg is perhaps this country's most distinguished historian of hospitals and medical care. Steven Schroeder has managed to combine active involvement in clinical medicine, teaching, research, and administration with effective participation in national policy debates in a number of forums. Frank Sloan is not only a superb economist but also one with a rare and all too unique skill for translating academic concepts into practical and intelligible form. And Mitchell Rabkin brought to our group not only his experience as chief executive officer of one of the nation's great teaching hospitals, and his active roles as physician and teacher, but also his distinctively important expertise in hospital nursing. The two of us contributed our own sense of history and

public policy, with our work on asylums and nursing homes proving especially relevant to the task at hand.

Although the disciplinary differences among the authors were marked, and their relationships to hospitals even more disparate (from day-to-day administrative responsibility to an exclusively scholarly interest), there was more agreement among us about the future of the hospital than we had initially expected. Without doing full justice to the range of opinion and approaches that characterize the individual essays, we can note some elements of the consensus that emerged.

First, none of us doubt the continued survival of the hospital, nor, indeed, its continued centrality to the delivery of health care. Long into the twenty-first century, the hospital will be the mainstay of medical services. For every new procedure or technological innovation that will facilitate delivery of health care on an outpatient basis, there will be another that requires an inpatient stay. The techniques that make it possible to have a patient undergo surgery and be back home the same day will have their counterpart in transplantation procedures that will cure once incurable diseases but require a two-week hospital stay. The effects of technology are likely to balance out, moving some procedures out of the hospital while moving others back inside. Perhaps more important, it is clear to us that the boundary between what belongs in the hospital and what should go outside is not entirely technological, but defined at least in part by economic, ideological, and organizational forces. Those forces, which now promote the de-emphasis of inpatient hospital care, may well swing in the opposite direction before too long.

Demographic changes are also likely to increase public dependence on the hospital; the greying of America (and other industrial countries as well) will insure a steady supply of patients. No matter how much noninstitutional services are expanded, the last years of increasingly prolonged lives will continue to include intermittent hospitalizations.

Moreover, the demands of medical training and research are bound to maintain the significance of university and tertiary care medical centers. As medical investigations grow still more intricate and demanding in terms of time, equipment, knowledge, and specialization, the gap between the bench researcher and the bedside clinician, already large, will expand. The hospital, in turn, is likely to be one of the few institutions that will integrate the two activities.

However popular it was several years ago to predict that the hospital industry (or perhaps even the entire field of health care) would become wholly corporatized and oligopolistic, such predictions, it seems to us, were exaggerated responses to short-term changes. Although it would be simplistic to suggest that the not-for-profit hospital has a secure fiscal future, the essays that follow will make clear why the voluntary hospital will continue to be the mainstay of the system and will continue to find ways to muddle through economically.

Second, we are convinced that both within and without the hospital the erosion of physician hegemony is likely to accelerate. By the opening decades of the twenty-first century, the physician may more closely approximate a salaried employee of the hospital than the "captain of the ship." The balance of authority among trustees, administrators, and physicians has fluctuated over time, and the dominance of the physician over the past several decades may not be at all permanent. Indeed, we anticipate over the coming decades that the increased supply of physicians, the complexity and cost of inpatient technology, and the increasing competition among hospitals, among other factors, will contribute to major changes in relationships between doctors and hospitals.

This change in hospital-physician relations will be reinforced by a concomitant shift in the balance of power from the seller (the hospital) to the buyer of health services. Even more important, consumer sensitivity to patient rights is likely to expand, and so will consumer sophistication in expectations from hospitals and physician performance.

Third, we expect that hospitals will become more and more intensive clinically. Patients will be sicker, and hospital diagnostic and treatment procedures more invasive and risky. Under these circumstances, hospitals will find it especially difficult to enhance doctor-patient communication and hospital-patient nurturing. Although there are, for example, models of nursing care that may be both feasible and useful in accomplishing such ends, we are not persuaded that hospitals will make their implementation a high enough priority. The struggle to maintain a nurturing environment within the hospital may lose still more ground.

Fourth, although we are not certain of all its implications, we are alert to a series of issues around gender that will create new tensions for the hospital. Until the present day, and with the obvious exception of nursing services, the hospital has been a male citadel,

in a variety of ways. The executive leadership for the hospital has been male (with the exception of some Catholic hospitals), the great number of clinicians have been male, and the great number of patients receiving high technology medicine, such as intensive care or transplants, have been male. Each of these may well change in the coming decades. Such changes may, in turn, usher in a period of internal gender warfare in the wards and board rooms. Just how they will play out remains obscure, but gender will have an altogether novel relevance to the future of the hospital.

Finally, any effort to make predictions about health and health care must recognize the unsettling power of the unpredictable, the sudden and potentially revolutionary or cataclysmic event. In 1980, it seemed self-evident to deliver the valedictory on deadly infectious diseases, but then came acquired immunodeficiency syndrome (AIDS).

Although the impacts on hospitals have already been enormous, and will no doubt grow, no one knows yet how extensive the AIDS epidemic will be, or how long it will last, or what some of its longer-term sequelae will be. It is perhaps the strangest kind of irony that a system of institutions initially created, at least in part, to respond to epidemics of infectious disease should be so completely shaken by a new infectious disease epidemic just at the time when its historical role appeared completely obsolete. The AIDS epidemic has already transformed, in the most practical and intimate ways, the physical relationship between hospital patients and hospital caregivers; it will, before too long, also contribute to a transformation in the ways systems of hospital care are organized and in the ways in which payment is made for the services rendered.

Although the AIDS epidemic illustrates the inherent unpredictability of the future, it should not blind us to the extent to which the future of hospitals is not only not predetermined but determinable. What the hospital of the future will be like — what it will look like, how many there will be, how they will be organized, how they will be financed — depends to some degree on epidemiology, on technological change, on changes in the social and economic environment. But it also critically depends on the choices people in hospitals make and on what concerned outsiders, whether on corporate boards or government agencies, decide. The future of the hospital will not just occur; it will be made, consciously or unconsciously, in the choices and decisions of hospital administrators, trustees, staff members, public officials, educators, and community leaders.

At several points in this volume, we have noted the extent to which hospitals have responded to their environments in largely reactive ways, adapting to what came at them, rather than steering their own courses. The most fundamental conviction that led us to undertake this project, however, and one confirmed throughout the essays that follow, is that there exists, perhaps more than ever, the opportunity for hospitals, and those who care about them and their patients, to shape the future of the institution. The future will occur one way or another, but hospitals have an extraordinary opportunity to shape the outcome.

The future of the hospital is thus indeterminate precisely because those involved with hospitals have yet to decide what the future should hold, or how they should act to make it come out right. Obviously, we have our own opinions, agreements, and disagreements. It is our hope that this volume will help to clarify both the choices and the necessity for making them.

Looking Backward, Thinking Forward: The Roots of Hospital Crisis

CHARLES E. ROSENBERG

Introduction

American hospitals have always disappointed. Each generation during the past century has deplored some aspect of this seemingly necessary institution. In the late nineteenth century, critics were indignant at the use — and apparent abuse — of free hospital services by men and women able to pay private physicians for care. They were concerned as well about the difficulty of imposing cleanliness, economy, and order on an intractable institution.[1] At the beginning of the present century, a concerned minority of progressive reformers assailed the hospital's forbidding impersonality and bureaucratic rigidity, while other critics (and sometimes the same ones) decried its failure to attain the standards of efficiency and productivity that prevailed in the business world. In the 1920s and 1930s, planners urged that hospitals be made accessible to all Americans regardless of class or place of residence.[2]

After World War II, an expanding economy brought a solution to the problem of inadequate facilities; more seemed inevitably better and a suddenly generous federal government began to support the hospital enterprise in a variety of ways.[3] By the 1960s, a new generation of critics had begun to bewail this very expansion of hospital beds and services; it had created, they charged, an institution dominated by bureaucracy and capital-intensive technology

1. These generalizations and many of those following are drawn from the author's *The Care of Strangers: The Rise of America's Hospital System* (New York: Basic Books, 1987).

2. The most detailed and influential compendium of such health care concerns were the publications of the Committee on the Costs of Medical Care. Between 1928 and 1933, The University of Chicago Press published 26 monographs commissioned by the Committee, a massive summary volume, and a number of minor publications.

3. The Hill-Burton Act of 1946 providing subsidies for local hospital construction marked a significant shift toward a growing federal health care role; Rosemary Stevens, *American Medicine and the Public Interest* (New Haven: Yale University Press, 1971), pp. 509–513.

Transactions & Studies of the College of Physicians of Philadelphia Ser. 5, Vol. 12, No. 2 (1990): 127-150
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and controlled by career-driven physicians and socially insensitive administrators.

Since the mid-1970s, economic problems have seemed most pressing. Third-party payers, both private and public, have sought to cap runaway costs, while profit-making hospital corporations have sought to take advantage of a seemingly risk-free niche in the American economy. Hospital planners, administrators, and a good many physicians have fallen victim to an outbreak of acute "Chicken Little" syndrome, wringing their hands as they wait for some actuarial sky to fall. Probably no generation has undertaken a broader and more stressful examination of hospital services.

An institution that has never been more necessary has never seemed more problematic. Today, voluntary hospitals discuss their market share and place in what is now called "the health care industry." Their administrators negotiate with health maintenance organizations and other wholesale customers, while casting about for "profit centers" in the form of outpatient surgery units, sports medicine, and eating disorder clinics. Hospital managers measure earnings against the cost of capital and, in many regions, look over their shoulders at competition from profit-making rivals — as both nonprofits and for-profits begin to look more and more alike. The situation seems unprecedented; to many in the health care professions, it is as offensive as it is uncomfortable.

All of this is very much in the here and now; conditions so novel and unsettling minimize concern for the past. "What are the hospital's *real* problems," a questioner asked me at a seminar some months ago, "aside from emotions and history?" But both history and emotions are fused reality; attitudes and historically determined interests are as "real," and can be as constraining, as any other marketplace variable. What individuals assume, value, and anticipate are structuring — and, in fact, structural — elements in defining the boundaries within which economic and professional motives operate.

And although many of the key elements in today's medical care system seem to have come into being during the past quarter-century, they have been built upon well-established foundations. As early as the 1920s, indeed, the fundamental aspects of our contemporary hospital system were already in place. Even then, most Americans expected a great deal of these impressive institutions and such enthusiastic anticipations were already tied to a vision of the hospital as scientific and therapeutically efficacious. No longer was

it merely a refuge for the poor alone, as it had been since its origins in the eighteenth century and throughout the nineteenth.[4] By the same time, an intense and intimate relationship between the hospital and medical profession had also come into being. The ambiguous and contradictory image of the hospital as social service institution, on the one hand, and, on the other, as purveyor of technically-defined and legitimated services was already well-established. This confusion was paralleled and exacerbated by the voluntary hospital's place in an ill-defined terrain between the public and private sectors.

There have certainly been major changes in health care and for hospitals since World War II, among them, the emerging role of the federal government, the expansion of third-party payment, and the enormous and capital-intensive growth of technical capacity. But all of these elements of change were assimilated into a system already rigid and precisely articulated, strengthening, rather than challenging, the fundamental aspects of that system.

The Hospital Medicalized

By 1920, the hospital and the medical profession had negotiated an intricate symbiosis. It began with education and staffing and was by no means a novel relationship. The hospital had always been important to the training and status of a small group of elite urban practitioners. Ambitious and well-connected medical students had always sought training on the wards; senior physicians expected to teach on those same wards; hospital trustees had always assumed that their staffing needs would be met by the volunteer labor of local practitioners. Though the hospital had in this sense long been important to elite medical careers, it was not until the twentieth century that it became central in the education and certification of every regularly licensed physician in an increasingly bureaucratic and tightly-ordered medical profession.

The hospital had also become important to the delivery of medical care. During the first century of American independence, none but the urban poor would ordinarily have been hospital patients; by the 1920s, however, Americans of every class and almost

4. Mental illness provided the only consistent exception to this generalization. Private asylums were able to attract a middle- and upper-class clientele from among families who would never have considered hospital treatment for a family member with a normal — that is, less troublesome and less stigmatizing — ailment.

every locality might be treated in a hospital bed. Although the great majority of the sick were still treated at home in the 1920s, life-threatening ills and surgery were firmly associated with the hospital and its professional staff, its laboratories, and its antiseptic operating room. The hospital had already become a fundamental and quality-defining element in American medical care.

Both the legitimacy and the allure of the hospital turned on the perception of its healing promise and the necessarily technical basis for such therapeutic expectations. Disease was a discrete and specific condition; the task of hospital medicine was to intervene in its course. Those physicians who practiced the most visible and visibly efficacious of such techniques enjoyed particularly high status. Surgery fit neatly into this pattern of prestige and expectation, as did the management of both acute infectious ills and life-threatening episodes in the course of a chronic disease.

Yet, as was apparent to students of medical care by the 1920s and 1930s, the crusade against infectious diseases seemed to have already borne fruit. Cholera and smallpox had vanished from the average physician's practice; typhoid and diphtheria were no longer major problems, and even the incidence of tuberculosis, the greatest killer of the previous century, was rapidly declining. With this decrease in communicable disease and the rapid aging of the American population, the burden of medical care shifted increasingly to "constitutional" and degenerative ills, geriatrics, and mental illness. Perceptive students of medical policy were already contending that an older population implied the need for expanded chronic and long-term care.[5]

But the hospital of the 1920s and 1930s had already become a relatively inflexible, acute-care-oriented institution. Contemporaries concerned with public health and social medicine were well aware of what they regarded as a one-sided — and disproportionately costly — emphasis on acute beds at the expense of chronic care facilities. And this was only one of a variety of criticisms levelled at the hospital's social role.

As early as the first decade of the present century, a diverse array of reformers had called for a recasting of hospital resources.

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5. See, for example, Ernst P. Boas and Nicholas Michelson, *The Challenge of Chronic Diseases* (New York: The Macmillan Company, 1929); Ernst P. Boas, *The Unseen Plague: Chronic Disease* (New York: J.J. Augustin, 1940); Mary C. Jarrett, *Chronic Illness in New York City,* 2 Vols., (New York: Columbia University Press for the Welfare Council of New York City, 1933).

One familiar criticism urged the need for more convalescent and extended care beds. Another asked for increased outreach — treating the patient as the member of a particular family and community, and not simply as a diagnosis.[6] Public health nursing blossomed during this period; and it too was characterized by an emphasis on the costs and rigidity of inpatient hospital services and the need for flexible outpatient care and the prevention of disease through education.[7] Public health workers also saw a need for more aggressive approaches to the shaping of individual regimen; diet, cleanliness, and even eugenical counseling needed to be brought to the ordinary family. Other advocates of health care reform called for an expansion of outpatient clinics and dispensaries and for increased investment in the new profession of medical social service; the hospital had to be seen as one aspect of a coordinated and community-oriented medical care system — not as a socially unaware, procedure-oriented repair shop. Patients were still people — and family members — when they were being treated in a hospital's wards and rooms; and they were still its patients after they left a hospital's beds.

But such reformist arguments had little impact. Outreach was tainted with the aura of charity medicine, and in some of its aspects seemed to threaten the private practitioner's still often-shaky economic prospects. In the 1920s, for example, organized medicine opposed government support for both venereal-disease and maternal and child health clinics. High status within clinical and hospital medicine was routinely awarded to those who intervened most dramatically and in clearly mechanistic terms; surgeons enjoyed such prestige, as did fledgling cardiologists — and, of course, the more prominent consultants in what we would now call "internal medicine." Psychiatrists and outpatient physicians seemed more marginal to the medical enterprise.[8]

Consistently enough, staff and house-officer positions at chronic disease facilities were hard to fill; such institutions were

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6. This paragraph is based on the discussion in Rosenberg, *Care of Strangers*, Ch. 13, "The New-Model Hospital and its Critics," pp. 310–360.

7. For the most recent history of public health nursing, see Karen Buhler-Wilkerson, "False Dawn: The Rise and Decline of Public Health Nursing, 1900–1930" (Ph.D. diss., University of Pennsylvania, 1984).

8. It is not surprising that medical career choices reflected — and still reflect — such intra-professional status relationships. But this is not simply a sociological truism, it is a political reality, a constraint that helps define policy choices within both specific hospitals and the health care system generally.

depressing, the capacities of medicine in them minimal, and the "victories" of therapeutics were few and fleeting. Managing long term illness offered little to the most prestigious hospitals or to the great majority of ambitious young men. The older patient was, of course, often seen by highly-trained, prestigious, and flourishing specialists — surgeons and cardiologists, for example, confident in their technical skills and hardly enthusiastic about the prospect of referring clients to another specialist. It is not surprising that geriatrics should have languished for most of the twentieth century.

Within the hospital of the 1920s, technical resources had become increasingly important — both as symbol and in substance. A gleaming antiseptic operating room and laboratories for clinical pathology and radiology served to justify an increasing concentration of personnel and capital resources. Even though nursing might have been equally significant in the actual delivery of hospital care, it failed to rouse the enthusiasm of hospital publicists — or of prospective donors. The hopes of laymen and the new-found confidence of physicians turned on the promise of medicine's new diagnostic and therapeutic tools. The techniques that had banished so many infectious ills promised to be the most appropriate for dealing with degenerative disease as well.

Technology had also been integrated in a practical way into the hospital's day-to-day routine. At the turn of the century, only antiseptic surgery had been an important aspect of hospital therapeutics; by the 1920s, both diagnosis and treatment had become increasingly technical, less and less easily practiced in the patient's home. Surgery had expanded dramatically, and clinical pathology, radiological diagnosis and therapeutics, even the beginnings of electrocardiography were gradually — if as yet inconsistently — being incorporated into the average patient's hospital experience.[9]

This was an economic as well as medical evolution. At the beginning of the twentieth century, laboratory costs had seemed enormous for hard-pressed hospital budgets, but with the increase in numbers of private patients came the gradual realization that technical procedures could pay for themselves, as well as upgrade the hospital's image and improve the quality of care offered to its patients. The discovery that separate charges could be imposed for

9. Certain diagnostic *tools* — the laryngoscope, ophthalmoscope, otoscope — had become a part of regular practice by the last quarter of the nineteenth century. These were not of course limited to hospital use, but were associated with specialty practice, which was in its turn associated disproportionately with hospitals.

the use of an operating room, for laboratory tests, for the work of pathologists, anesthesiologists, and radiologists meant that investment in technology could pay for itself (and, if carefully managed, could become a source of profit).

It was not surprising, then, that psychiatry, public health, and outpatient medicine should have occupied relatively low positions in medicine's status hierarchy in the decades between the wars. They represented, in their various ways, parts of the medical enterprise that seemed the least promising, the softest, and the most inconsistent with the reductionist, technical, and often impressively efficacious style of practice that had become associated with the medical profession. For all these reasons, the general hospital had become a more explicitly *medical* institution, while the meaning and legitimacy of that medicalization was construed — by both lay persons and physicians — in technical terms. Hospitals had become the appropriate place for practicing the most efficacious and prestigious medicine; such had hardly been the case a half century earlier.

But if the hospital had become "medicalized" by the 1920s, however, it must be emphasized that the medical profession had by the same time become hospitalized. Bedside training now began in the medical student's undergraduate years and continued through a compulsory internship — and for the more ambitious, through a residency as well. The house-officers' intense, shared experience was an important element in the *esprit de corps* and self-image of physicians, regardless of where they were ultimately to practice. Specialists and consultants, of course, practiced in a hospital setting, while admitting privileges were important to the majority of general practitioners, no matter how small or large their local community. All medical functions — including teaching, research, and specialty training at university hospitals — were structured into a care-based staffing system. Though many medical school faculty and attending physicians pursued clinical investigation in the 1920s, almost none boasted appointments explicitly designated and funded as research positions. The habit of confounding care, teaching, and research had its beginnings long before the advent of government research grants and fellowship programs. The status hierarchy in which teaching hospitals and their associated clinical facilities stood at the apex of influence — and philanthropic funding — had already been established.

The Voluntary Hospital: Public and Private, Neither and Both

American voluntary hospitals have never been private except in the narrowest legal sense. Until the recent past, the great majority of America's important and influential hospitals were either explicitly municipal, or not-for-profit institutions operating for the common good. Such hospitals paid no taxes, were immune from civil suits, and received a variety of subsidies from state and local governments. Their governing boards assumed that they acted as stewards of society's resources, which were to be expended in pursuit of the general welfare. A for-profit sector has existed ever since nineteenth-century surgeons rented houses in which to treat private patients, but until recent years it has never played a significant role in the provision of medical care.[10] Both the hospital's healing function and the presumably selfless and necessarily benevolent nature of that defining purpose have always guaranteed that hospitals would be clothed with the public interest. Their mission constituted a "sacred trust" that differentiated the hospital corporation's activities from those of an ordinary marketplace actor.

Consistently enough, cities and states have supported voluntary hospitals since the founding of the Pennsylvania Hospital in 1751.[11] Even explicitly religious institutions have been the beneficiaries of public subsidies. In the realm of ideology, however, Americans have historically held fast to one consistent distinction among hospitals, but it was not the distinction between public and private that a lawyer might have understood and defended. It was a traditional differentiation between almshouse and hospital, between municipal — or county — and voluntary institution, between welfare and technical functions, and between the unworthy and worthy poor.

The eighteenth- and early nineteenth-century almshouse was an undifferentiated receptacle for the "dependent," as the conventional phraseology termed those unable or unwilling to work. Alms-

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10. Private sanitoria for the care of mental illness, alcoholism, drug addiction, and tuberculosis have had a long history as well, but one little studied by historians. And in many small towns, of course, hospitals owned by individual physicians provided the only inpatient facilities into the 1920s and 1930s. In other communities, so-called industrial hospitals, operated by mining, railroading, or lumbering corporations, played a similar role.

11. On the history of the Quaker-sponsored Pennsylvania Hospital, see William H. Williams, *America's First Hospital: The Pennsylvania Hospital 1751–1841* (Wayne, PA: Haverford House, 1976); Thomas G. Morton, assisted by Frank Woodbury, *The History of the Pennsylvania Hospital 1751–1895* (Philadelphia: Times Printing House, 1895).

house "inmates" included the mentally and physically handicapped, the aged, the infant, and the sick. In larger cities, medical care and medical personnel soon became important in local almshouses, for many of those inhabiting their beds were, in fact, the sick and the chronically ill aged — even if they had been admitted as "indigent." The categories "sick" as opposed to "indigent," "worthy" as opposed to "unworthy," dissolve under closer inspection: were the chronically ill in the almshouse sick people deserving sympathy or indigent paupers unwilling to support themselves and thus deserving contempt or censure? To ask the question is to underline the arbitrariness of these labels.

But the tenacious belief in a fundamental distinction between the culpably dependent and the guiltless victim of random sickness was important to nineteenth-century Americans. It served not only to justify a frugal regimen at almshouse facilities, but also as a major argument to justify the founding of our pioneer nineteenth-century hospitals.[12]

The contentions of hospital advocates in the nineteenth century seemed reasonable and equitable to their peers. It was unfair to subject the honest working man or woman to demeaning contacts within the almshouse's stigmatizing walls. A hospital open only to the remediable sick could be presented as a very different sort of institution, one in which no factor other than sickness itself determined eligibility for admission. It was consistent, then, that admission policies at most such voluntary hospitals categorically excluded the presumed victims of their own misdeeds, such as syphilitics, alcoholics, and unmarried mothers.[13]

The provision of medical care outside an almshouse setting was a necessary path to reform. So long as acutely-ill patients were treated in an almshouse setting, the dominance of chronic and geriatric ailments would make the institution unattractive to elite

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12. One thinks, for example, of hospitals as diverse as the Massachusetts General, Hartford, or New York's Episcopal, Mount Sinai, and Presbyterian. Even some municipal hospitals, such as the Boston City (opened 1864), were established in the hope of creating an explicitly *medical* institution — one in which the sick would not be stigmatized while receiving care.

13. Most nineteenth-century hospitals also excluded the chronically ill, on the assumption that limited resources should be devoted to those who might be cured and returned to the workforce. This necessarily consigned the often worthy poor to the almshouse in their declining years. It was a moral inconsistency that disturbed some nineteenth-century hospital advocates who urged that private institutions find a place for the care of such unfortunates.

physicians concerned with the hospital's potential teaching role. So long as laymen were aware that admission to a municipal hospital was determined exclusively by dependence, they would regard the institution with fear and hostility. To be treated in New York's Bellevue, Chicago's Cook County, or in Philadelphia General Hospital was to admit a culpable lack of options. Moreover, the frugal tradition of "less eligibility" meant that the municipal hospital's internal standards of diet and amenities would routinely be maintained at a minimum level. No one, after all, was to be encouraged to prefer public alms to even the most meager wages earned by his or her own efforts.

No respectable group of Americans were more aware of grim municipal hospital conditions than the physicians who practiced in them. It is no accident that staff physicians at such institutions were leaders in calling for the severing of hospital from welfare services. They sought to make the municipal hospital exclusively a healing institution, subject to the claims and judgments of medical science and no longer hostage to political expediency and to the crushing and irremediable burden of poverty and incapacity. Key to the logic of such reform pleas was an often-expressed faith in medicine's healing capacity, and the egalitarian corollary that every individual had a right of access to such undeniably therapeutic resources. This technological entitlement implied an increasing gap between the hospital's welfare and curative functions. It was consistent, moreover, with the intellectual trends in the medical profession and the parallel lay attitudes that granted the highest status to those aspects of medicine that promised cure in a categorical and visibly technical form. Insofar as human problems could be defined in technical — and, in practice, episodic — terms they made a strong appeal for public sympathy and support. Yet much of medical care was in fact devoted to the chronic and multidimensional miseries of families and individuals; it was difficult to subsume such grim realities to the most prestigious aspects of the hospital system.[14] The social

14. Average lengths of stay decreased substantially at the end of the nineteenth and beginning of the twentieth century. The increase in surgery seems to have been one factor, the careful avoidance of chronic cases another. The residue of old age and chronic illness remained the responsibility of county and municipal facilities. Not surprisingly, average length-of-stay and death rates remained higher at such institutions than those prevailing at their voluntary contemporaries. Charles E. Rosenberg, "From Almshouse to Hospital: The Shaping of Philadelphia General Hospital," *Milbank Memorial Fund Quarterly*, 1982, *60*:151; and Harry F. Dowling, *City Hospitals: The Undercare of the Underprivileged* (Cambridge, MA: Harvard University Press, 1982).

worker or would-be improver of maternal diets has always fared poorly in comparison with the surgeon.

The pressure for increased access to hospital facilities implicit in a growing faith in medical capacities had a number of consequences in the 1920s and 1930s. One was a widely shared concern with the fact that the most technologically-advanced medicine seemed available only to the very poor and very rich. The hospital ward and its subsidized beds were still marked by the stigmatizing aura of charity, while the private room with its capacity to protect individual sensibilities was limited to a small percentage of Americans. One solution, of course, was the construction of "semi-private" wings or buildings intended to serve the needs of middle-class men and women. The assumed prerogatives of class and the equally unquestioned public mission of the not-for-profit hospital made such solutions plausible. But beneath these experiments in hospital care for middle-income Americans lay a powerful conviction: if the hospital and its technical skills provided the best hope for cure, then every American should have access to these resources.

The Emergence of Third-Party Payers

The Great Depression raised the stakes in the 1930s; new solutions had to be found, tactics that would preserve both the hospital's fiscal integrity and the middle-class patient's access to the institution. The creation of Blue Cross and Blue Shield was one outcome of this configuration of need, interest, and assumption.[15] These prepaid insurance schemes also reflected the peculiar status of the hospital as clothed with the public interest and somehow above the marketplace. Faith in medicine's technical capacities — as centered in the hospital — guaranteed that these prepayment mechanisms would occupy the generally unquestioned place of quasi-public agencies, but would be little constrained by public supervision.

These assumptions, coupled with bureaucratic necessity, led the Blue Cross and Blue Shield to adopt administrative strategies that reified and exacerbated the reign of acute, reductionist models in health care. No disease was legitimate unless it could be coded in a nosological system. The schematic logic that divided medical care interactions into the specifically diagnosable and thus legiti-

15. For a lucid brief discussion of these events, see Paul Starr, *The Social Transformation of American Medicine* (New York: Basic Books, 1982), pp. 290–334.

mately reimbursable, as opposed to the preventive or chronic, paralleled in another sphere the distinction between worthy and unworthy poor, between the voluntary and almshouse hospital. It reflected as well existing professional priorities that put acute individual care at center stage and placed preventive and chronic care on the periphery.

At the same time, of course, this particular mechanism entrenched all those interests that benefited from it, including hospitals, the doctors who practiced in them, and every participant in the "health industry." Nevertheless, physicians maintained a key role in the generally expanding system. For if the labeling of a discrete ailment legitimated the expenditure of dollars, it remained solely within the power of physicians to affix those labels, and thus channel and legitimate reimbursement.[16] The emergence of Medicare and Medicaid in the mid-1960s did not challenge the ideological assumptions or interests embedded in earlier prepayment schemes; they simply added a deep new pocket to subsidize an existing system.

It is hardly surprising that powerful interests should have found this a comfortable environment: a controlled context in which cost-plus procurement replaced normal, and sometimes chastening, market transactions. Third-party payment has in general reflected the interest of providers but has never been perceived in this potentially critical and antagonistic way by most Americans; the convenient and deeply rooted blurring of distinctions between the public and private sectors, between the technical and the egalitarian, helped disarm such skepticism. It is paralleled by the way in which programs that largely benefit middle-class constituencies, such as Medicare and tax deductions for home mortgage interest, have been perceived as rights, while those designed to help the less fortunate, such as Medicaid and rent subsidies, are seen as welfare and thus demeaning. In a fundamental way, these examples parallel the attitudes expressed in an older set of polarities that distinguished between almshouse and hospital, public and private, and welfare maintenance and scientific healing.

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16. This is not to suggest that all physicians had uniform interests or occupied the same niches; but the system supported, in different ways, academicians and general practitioners, big city specialists and small town surgeons. It was a formula that muted the potential diversity of interest among such medical men, so long as the system kept expanding.

Cultural Values, Medical Expectations, and Hospital Growth

The American hospital is an American institution. As such, it partakes of and reflects more general aspects of American cultural values. It has also been seen as particularly praiseworthy, the product of a local, and in more recent years national, commitment to community in the highly valued — and value legitimating — form of advanced technology. Throughout their history, Americans have esteemed countries and communities able to mobilize advanced technology as a social resource; such societies have seemed more admirable, more moral, somehow higher on the scale of worthiness.[17]

Thus boosterism provided one motivation for the rapid spread of hospitals during the years between the late 1880s and 1910; community pride began to demand that every middle-sized town support one of these public amenities. Such sentiments found natural allies in local practitioners who urged the founding of hospitals and volunteered to staff them. No forward-looking physician wanted to practice less than the best possible medicine, or lose his prosperous patients to consultants in larger communities with better facilities. X-ray equipment and facilities for aseptic surgery were perceived as fundamental needs by 1910, even if some communities could not muster the resources to build and maintain the hospital in which such costly facilities seemed naturally to dwell.[18]

Communities wanted hospitals not only because they provided trained nurses and 24-hour care, but because they seemed to incorporate and represent the most scientific and technically-advanced form of the healing art. These were decades during which most prosperous and educated Americans were fascinated both by the regalia and the rhetoric of science, even if the content remained open to debate. This was a period during which the art of warfare became military science, and when domestic science, library science, and political science all came into being. In retrospect, it seems

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17. One need only be reminded of nineteenth-century Western assumptions that the steamboat, telegraph, power loom, and repeating rifle were naturally associated with the moral and social superiority of Christianity. A less developed technology was presumed to be the inevitable counterpart of "lesser" religions and their far-from-admirable moral order.

18. Physicians also benefited from the saving of time implied by the concentration of seriously ill or postoperative patients in a community hospital and the availability of trained nurses. Without such facilities a busy practitioner would have had to make frequent home visits and arrange for patients' nursing care.

obvious that the impact of the laboratory on medicine's therapeutic capacities still lay largely in the future; but Americans had been enormously impressed by a seeming transformation in medical knowledge during the years between 1880 and the 1920s. Newspapers and magazines were quick to report the discovery that many of mankind's greatest killers were caused by specific microorganisms. They were equally enthusiastic in reporting that some of these ills could be averted through preventive "inoculations" or, in other instances, cured by the injection of substances discovered and manufactured in the laboratory. The public health worker's ability to evaluate water quality, to diagnose ailments, and to disclose healthy carriers of disease through the use of serological tests or bacteriological screening seemed enormously encouraging.

Physicians as well as laymen accepted the promise of these new techniques with comparatively few reservations. Most ignored or were unaware of the fact that medicine still possessed few tools for intervening decisively in the course of an infectious disease once the illness had been contracted. Some physicians in the first decades of the twentieth century did worry that traditional clinical skills and human interactions would be ignored in an uncritical obeisance to the laboratory and its enticing new tools. But they represented a minority position. The elite in American medicine were increasingly converts to this new dispensation, not so much in the role of full-time researchers or laboratory scientists, but as specialists and purveyors of the laboratory's products in diagnosis and treatment. It is no accident that private philanthropy turned with a novel and growing generosity to the medical profession and medical institutions, that state legislatures proved themselves increasingly willing to support state university medical schools, and that municipalities sought to upgrade their health facilities. In each case, the reform rationale turned on the vision and promise of medicine as applied science.

These attitudes about medicine were coupled with an older American faith in technology, with the ordinarily unstated but deeply felt conviction that if something could be done, it should be done. And the healing of sickness provided an emotionally resonant and seemingly disinterested goal to justify the mobilization of social resources. This complex of assumptions about science and its necessary application constituted a compelling argument for the proliferation of hospitals and progressive upgrading of the technology that had come to provide their fundamental rationale.

To the extent that the provision of institutional health care could be uncoupled from its welfare heritage and defined in technical terms, it could mobilize powerful attitudinal support. Every man was entitled to life and health, and if technology could provide or safeguard those equities, it should be made to do so. It is not surprising that the need to improve the numbers and quality of hospitals in America's more deprived and isolated areas was a major concern of medical policy analysts, foundation advisors, and thoughtful physicians generally in the 1920s.

Health and healing had come to play an important role in a secular society, a society that was at the same time increasingly ill-equipped to deal with acute illness and death outside an institutional context. Funds to implement these assumptions became increasingly available after World War II. At the same time, technology grew rapidly in complexity and cost, increasing budgetary pressures and adding substance to arguments for expanding and renovating hospital facilities. Thus occurred the intersection of material and attitudinal factors that provided the legitimacy and guaranteed the inevitability of escalating hospital expenditures; it was demeaning to place a price on a man or woman's life or on their freedom from pain and incapacity. So long as the calculation could be seen in terms of a procedure or practice that might or might not be performed, the decision-making gradient would clearly be inclined in the direction of making that procedure available. And more and more of such procedures became real options in the decades after 1950; renal dialysis and coronary bypass surgery are only two such examples among a host of others. Quibbling over mundane dollars seemed inappropriate in the face of transcendent goals. The bottom-line was that there was no bottom line — and costs climbed dramatically in a highly bureaucratic and capital intensive enterprise.

In this sense, it would not be inappropriate to compare hospital costs with defense expenditures. In both cases money is spent in pursuit of a transcendent goal, in the one case "security," in the other "health." In both cases, cost-cutting could be equated with penny-pinching, an unworthy aim, given the gravity of the social goals involved.

In both areas, material interests obviously play a role; hospitals, doctors, and medical suppliers, like defense contractors and the military, have interests expressed in and through the political process. But ideas are significant as well: it is impossible to understand our defense budget without factoring in the power of ideol-

ogy; it is impossible to understand the nature and style of America's health care expenditures without an understanding of the ideological allure of scientific medicine and the promise of healing. Both the Massachusetts General Hospital and General Dynamics Corporation operate in the marketplace, but they are not bound by market discipline; and both also mock the presumed distinction between public and private that places them both in the category of private enterprise.

Ordering a Disordered Institution

Like many other institutions, the hospital of the 1920s had become a self-consciously rational and efficient institution. It was no accident that the efficiency movement helped shape the rhetoric and, to a lesser extent, the practice of hospital administrators, just as it had factory and public school administrators. At the same time, the hospital still bore the marks of its humanitarian and paternalist origins. (Religious hospitals in particular still reflected community values in a variety of ways.) Hospital workers were paid less than their similarly skilled peers, and compensated with a presumed paternalist security. House officers and student nurses still bartered their time for credentials and experience.

Nevertheless, the great majority of hospitals sought to follow the much-admired pattern of other large enterprises: the army, the corporation, the factory. The most efficient use of limited funds implied the careful evaluation of expenditures; exhaustive record-keeping, it was contended, guaranteed more consistent and higher quality medical care as well as the possibility of monitoring and controlling costs. Few contemporaries anticipated circumstances in which conflict might arise between bureaucratic efficiency and the quality of care ultimately experienced by individual patients.

In any case, it is clear that key aspects of the hospital's internal order had been transformed by the 1920s; the hospital was a very different institution from its mid-nineteenth-century predecessor. One such aspect was the professionalization of administration; another, and perhaps even more important, was the professionalization of nursing.

Nothing was — and is — more significant than nursing in shaping a hospital's internal life.[19] And the day-to-day routine of

19. For an important recent study, see Susan M. Reverby, *Ordered to Care: The Dilemma of American Nursing, 1850–1945* (Cambridge: Cambridge University Press, 1987).

patient care in large and medium-sized hospitals of the 1920s was controlled by a staff composed largely of student nurses, supervised by a cadre of more experienced training school graduates. (In small hospitals, a trained nurse might serve simultaneously as superintendent and chief nurse.) A decisive gap had been opened between the patient as object of care and the nurse as would-be professional, allied in some necessary, if ordinarily subservient, way with the staff physicians who oversaw and legitimated the provision of that care. In earlier periods, hospital nurses had been recruited from among recovered patients or from the community's servant class. They were not expected to identify with physicians or to see themselves as professional in their training or prerogatives. In the first decades of the twentieth century, nurse administrators were well aware of their less-than-secure professional identity and, lacking a prestigious and laboratory-oriented body of knowledge, dedicated themselves all the more tenaciously to the ideals of order and efficiency.

Hospital administrators, too, had come a long way from their nineteenth-century origins. Prudence, morality, and a bit of business experience described the qualities desired in a mid-nineteenth-century hospital superintendent. Trustees neither assumed nor expected any specific experience in the man entrusted with the day-to-day administration of their institution.[20] By the 1920s, however, the situation was rather different. Given the superintendent's expanded and diversified duties, most authorities agreed that experience and vocational commitment were a necessity for the job, especially in large institutions. There was some disagreement as to whether medical or lay superintendents might be more appropriate, but "professionalism" was assumed. A hospital superintendents' association was organized in 1899, and textbooks and specialized journals had already become available for the would-be hospital chief executive.[21]

The place of the medical profession in the hospital of the 1920s was more prominent as well as more formal than it had been in previous generations. The hospital had become more explicitly and

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20. I use "man" advisedly, inasmuch as large urban hospitals engaged only males as superintendents. A few smaller hospitals for women and children, the Boston Lying-in Hospital, for example, did hire women as "matrons," but such instances were atypical.

21. See Rosenberg, *Care of Strangers,* Chap. 11, "A Careful Oversight: Reshaping Authority," pp. 262–285.

self-consciously a technical institution; medical knowledge appeared increasingly effective and decreasingly accessible to lay understanding. It seemed both natural and appropriate that medical practitioners and medical judgments should play a commanding role in hospital governance. Physicians determined admissions policies and, often, capital expenditures as well. These areas of decision making had been tenaciously contested in the previous century, when even individual admissions might be questioned by lay trustees or superintendents.[22]

Matters were quite different by the 1920s. Whether an institution was headed by a trained physician or not, its chief executive was bound to defer to the opinion of his or her medical staff. Such deference was particularly unavoidable in those hospitals dependent on private patient fees for substantial portions of their annual income. An administrator could hardly ignore the needs and opinions of physicians whose referrals filled private rooms. The faith in scientific medicine that helped encourage the new-found willingness of respectable Americans to enter hospitals motivated a more general lay deference in any area that could be construed as technical. Hospital decision making was increasingly responsive to physicians and medical knowledge.

Meanwhile, every stage of the physician's career was becoming embedded in the hospital — in the large teaching hospitals most prominently, but to a degree in every institution. The needs of certification and teaching helped define the role and duties of house officers, and wedded individual hospitals to a national network of certifying agencies. Accreditation made the individual hospital and its traditionally autonomous governing board subject to external bureaucratic control. Less concretely, but perhaps even more important, the individual hospital was subordinate to the dictates of an internationally-agreed-upon body of medical knowledge. Such knowledge had a variety of implications, from the way in which surgical and radiological facilities should be built and maintained, to appropriate doctor-patient ratios.[23] The hospital was well along

22. Early in the nineteenth century, *all* admissions had to be approved individually by lay boards; the situation shifted gradually in the course of the century as the prestige of medical judgments increased and trustees moved gradually away from day-to-day hospital oversight.

23. The prestige of scientific medicine also legitimated hospital accreditation and the acceptance of bedside undergraduate teaching, internship, and residency programs. For a useful account of these developments, see Stevens, *American Medi-*

in its shift from a paternalistic institution controlled by local laymen and reflecting traditional ideas of stewardship, to a professionally-dominated and bureaucratically ordered institution responsive to national and even international standards and constraints.

The hospital had also entered, if somewhat more tentatively, the impersonal world of market transactions. In some ways, as suggested earlier, the hospital in the 1920s still bore the marks of its origins in a very different sort of society. The barter of services for credentials, of work for status, and of lower wages for paternalistic security still played an important role, but cash transactions were becoming increasingly important. A few physicians were paid in dollars, especially by those institutions too small or undesirable to attract volunteer labor in the form of interns and residents. Even more important was the growing role of fee-for-service practice within the hospital. Both the promise and vulnerability of the hospital rested on its ability to attract and care for paying patients. This in itself constituted a major change from earlier periods. But it reflected another reality as well: the emergence of the hospital as an important aspect of care for the wealthy and middle-class, as well as for the poor. The changing expectations and practice patterns that had helped bring about this change would play a key role in maintaining the centrality of the hospital through the lean years of the Depression and into the increasingly obese years that were to follow.

Decentralization of Control, Centralization of Reality

As early as the turn of the century, would-be hospital reformers sought to address the institution's individualistic and seemingly anarchic nature. It was thought that regional planning and the imposition of agreed-upon standards might result in more efficient use of social resources. Philadelphia and New York, for example, sponsored organizations (both still in existence) aimed at achieving these ends.[24] But, as contemporaries agreed, their effectiveness was limited. Rivalry for prestige, and competition for government and philanthropic support and for a limited supply of private patients,

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cine and the Public Interest, and for the best recent account of scientific medicine and academic reform, see Kenneth M. Ludmerer, *Learning to Heal: The Development of American Medical Education* (New York: Basic Books, 1985).

24. I refer to the United Hospital Fund in New York and the Delaware Valley Hospital Council in Philadelphia.

overwhelmed the impulse toward rationalization and the subordination of institutional egos. In big cities, especially, the shared commitment to scientific medicine implied that no institution would willingly provide "second rate" facilities to its patients; ethnic, regional, and individual loyalties guaranteed that a functional, explicit, and necessarily hierarchical division of labor would not easily be accepted.

That there was little effective planning does not mean that there were no policies. The strength of social expectations, needs, and attitudes, and the power of medical knowledge and the institutional requirements of medical careers, imposed similar developmental patterns on hospitals of widely diverse origin. (A number of these parallels have been discussed earlier.) But at the same time, of course, hospitals had diverged by the 1920s so as to differ in ways that have come to seem both natural and familiar a half-century later. At the top of the hospital hierarchy were America's most prestigious and influential teaching hospitals — Presbyterian in New York, for example, Massachusetts General in Boston, and Barnes in St. Louis — many of them already dynamic elements in growing "medical centers" as they assimilated or attracted smaller and more specialized institutions. Ranked somewhat below them in status were the more prestigious municipal and voluntary hospitals in the nation's largest cities. Finally, there were the so-called community hospitals, institutions defined by their local sponsorship, patient population, and involvement fundamentally in the delivery of care, rather than in the teaching of a new generation of physicians or the accumulation of research findings. It does not require a great leap of imagination to recognize the late twentieth-century future in the already vigorous hospital establishment that served Americans in the 1920s.

Structured Crisis: The 1980s

The perceived hospital crisis of the 1980s had its roots in the years immediately following World War II. Science had never seemed more relevant, while the long pent-up economy provided resources for hospital expansion. The Hill-Burton Act (1946) granted funds for hospital construction, while the National Institutes of Health supported research and training (and, indirectly, hospital teaching and staffing). Employee-connected third-party payment expanded as well, providing a reliable, predictable, and expanding stream of revenue for previously hard-pressed institutional budgets. With the

passage of Medicare and Medicaid in the 1960s, the system was complete. Health care seemed to be in the national interest and few congressmen could, or wished to, oppose so benevolent a source of jobs, contracts, and services to constituents.[25] Similarly, corporations and unions negotiated health insurance into contracts, and passed the costs along to consumers. Despite its initial opposition to third-party payment schemes and federal involvement in reimbursement, organized medicine soon adjusted to this new world of guaranteed income, while hospitals expanded in the reassuring context of predictable negotiated rates.

At first, the expanding health care system seemed to be one in which everyone benefited and no one paid excessively. Certainly there remained a diversity of interest among corporations and their employees, physicians and hospitals, hospital administrators and hospital workers, the young and the old, the employed and the unemployed; but with a steadily increasing revenue stream, potential antagonisms remained largely latent. The hospital functioned as a seemingly politically neutral and socially desirable conduit through which equities flowed to ever more generously supported constituencies. The sick received prepaid inpatient and some outpatient care; physicians, a generous income; hospital administrators, a secure and profitable salary; suppliers, enthusiastic and free-spending customers. Even nurses and workers could band together to demand salaries approaching those available in the private sector. By 1965, the system was ideally positioned for a generation of expansion.

And, for a time, it seemed that many of the older dilemmas of medical care had been bypassed. The poor could, it seemed, be treated in less stigmatizing circumstances, while the working man and woman and the middle-class family benefited from a medicine whose quality would not be constrained by cost. The technical resources of the system both structured and legitimated reimbursement. Briefly, at least, it seemed that private hospitals could and would take over the burden of poverty and dependency that traditionally had been the responsibility of municipal and (a minority of) large urban voluntary hospitals. The egalitarian implications of a shared faith in technology made traditional distinctions between

25. The class-free aspect of Medicare was to have an extremely important political impact. By using age rather than need as a criteria for eligibility, the program was able to build powerful support, while seeming to sever itself from the taint of welfare medicine.

welfare and private medicine seem less and less defensible; technological entitlement became a force in itself, legitimating increasing hospital-based expenditures.

But in some fundamental ways the hospital system had changed less than the scale of its funding and the diagnostic and therapeutic tools at its disposal. The priorities and characteristics already built into American medicine a half-century earlier were in some ways only intensified by these newly abundant sources of support. The distribution of funds to existing institutions without a parallel increase in central control guaranteed that existing perceptions, structures, and priorities would determine its spending. Medical emphasis on acute care and interventionist therapeutics, for example, would hardly be questioned — nor would the status system and career patterns within the profession. The traditional conflation of education, care, and research functions continued, allowing both government and the health care system to defer difficult political and intellectual choices.

The hierarchical and increasingly academic and specialized character of late twentieth-century medicine has been accepted as necessary, even indispensable, but has created problems of priorities and personnel. No one wants to impede research or dilute the focus of the most intensely trained subspecialist; but how does one keep the prestige of such activities and individuals from skewing the provision of care? The formal egalitarianism of medical training and prerogative is belied by a far more complex and diverse reality of demands and contexts of care. Laymen were and are part of this equation as well: they have come to expect — in fact, demand — technical solutions for problems that may have no ultimate technical resolution. We want both care and cure, humane nursing and high technology; it is only recently that it has become clear that there may be conflict structured into these expectations. Technological change brings unanticipated costs and consequences, in medicine just as in agriculture and industry.

In the 1980s, the proliferation of support for medical care began to seem a metastatic growth, and the hospital, in particular, a brontosaurus browsing among rapidly drying swamps. It has become apparent that the hospital system's structure and dynamics have helped create the perception of disorder and crisis. The growth of a for-profit sector and the attempt through prospective payment systems (based on Diagnosis Related Groups) and other reimbursement mechanisms to control expenditures are in their differing ways

symptoms of the same disease. Profit-making enterprises have responded to a cost-plus environment; Medicare's DRGs are based on a literalist acceptance, a kind of *reductio ad absurdum*, of the mechanistic views of disease central both to medicine's intellectual history and to the institutional growth of hospitals and third-party payment.

Perhaps the crisis in hospital finance will stimulate some general reflections. Although that crisis seems, in the 1980s, to have turned on questions of financing, public dissatisfaction with hospitals implicates other aspects of health care as well. The shocked reaction to rapid private sector growth shared by many laypersons as well as physicians and health care administrators reflects in part the deeply felt assumption that the hospital was, and is, clothed with a social mission that transcends its place as marketplace actor. It seems somehow wrong to many Americans that managers and stockholders should benefit from healing the sick.[26]

Contemporary debate has clarified a number of other issues as well. We have been reminded, for example, that class and social location help determine the nature and quality of care an individual receives, no matter what the potentially relevant technical options. It has also become clear that widespread acceptance of third-party payment and the assumed universal entitlement to advanced medical care has created rigidities of its own: on the one hand, the sense of entitlement to insurance coverage; on the other, the growing awareness that some individuals are inadequately covered, and others not covered at all, in a fragmented prepayment system. It has become harder and harder to ignore the fact that some individuals have no stable employment while others are at risk of losing that employment, and, as a result, the health insurance that has in the past 40 years come to seem a natural right. Like reformers at the turn of the century, we have been reminded that the modern hospital can be a dysfunctionally narrow institution, oriented too exclusively to the episodic and the technical, as defined and legitimated by the care of acute ills. Care must be understood as something more than a residual category, that which is left after technical procedures have been exhausted or proved irrelevant.

While the hospital's productive capacities have been maximized, its "product" remains problematic. The growth of faith in

26. None of which is to deny that a good deal of such indignation reflects the special interests of particular institutions and individuals, who themselves benefit.

technology that legitimated the need to provide quality medical care has had unforeseen and not always desirable outcomes. We need to disaggregate the functions of teaching, care, and research and make choices among them. We have been reminded of some primitive truths: that technology does not always solve problems, but may only redefine old ones or create new ones, and that there may be conflicts between the collective interest and the maximization of personal equities (whether those equities are garnered in the form of dollars, status, or prestige).

The hospital can no longer conduct itself as a passive actor in a complex medical system, serving as a trough for the distribution of social and economic nutrients. Hospitals have interests that are not necessarily the same as those of any particular individual or group of individuals who earn their living in them. Our very awareness that we are experiencing a hospital crisis, the formulation and aggressive advocacy of widely differing diagnoses and prescriptions are all aspects of a dissatisfaction that is itself a prerequisite to change.

For generations the hospital has seemed a necessary and inevitable, thus laudable and legitimate, institution. Perhaps the most important truth that has emerged in the past decade is the conviction that hospitals are not inevitable institutional reflections of available technical capacity. Technology provides options; it does not choose among them. The American hospital is historical and contingent; its boundaries are not necessary but negotiated. Our contemporary sense of crisis is one aspect of an increasingly self-conscious process through which hospitals are in fact renegotiating accustomed boundaries. But such negotiations are never easy. Boundaries reflect accustomed privileges and habits of thought. They are not redrawn without a struggle.

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The Hospital as Caretaker: The Almshouse Past and the Intensive Care Future

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Introduction

Of all social institutions, the hospital would appear to have the most straightforward definition of purpose: to combat the diseases that patients present. Yet, no sooner does one begin to trace the history of the hospital than it becomes apparent both how recent and how incomplete this definition is.

First, the origins of the hospital rest not in healing the sick but in relieving the disabled poor, in serving as a shelter, a last resort — however overcrowded and uncomfortable — for those incapable of caring for themselves and with no alternatives. Not until the beginning of the twentieth century did the hospital become a "first resort," where those with ample resources of their own sought treatment and cure. The transformation was remarkable, indeed, truly revolutionary; the most stigmatized of society's institutions became among its most honored. The facility to which the down-and-out went to die became the one that the rich and powerful entered in order to be able to live.

This past has an extraordinary relevance to the hospital's present — and to its future, as well. To this very day, the hospital, not only the public institution, but the voluntary one as well, has been unable to slough off or to escape its initial obligation. It still must serve not one but two very different purposes: It must relieve the poor even as it cures the sick. Those who are without resources, for reasons we shall explore, are increasingly dependent on the hospital not only for its medical services but also for its social services, for relief not only of bodily pain but also of social deprivation. The hospital, in other words, remains in the business of charity even as it devotes itself to science. It retains its almshouse duties even as it invests its resources in high technology.

Second, and no less important, the hospital has traditionally been expected not only to perform diagnostic and therapeutic procedures but also to comfort, nurse, and educate all of its patients, no

Transactions & Studies of the College of Physicians of Philadelphia Ser. 5, Vol. 12, No. 2 (1990); 151-174
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matter what their resources. As the hospital carries out medical and surgical interventions, it must also minister to the sick in a time of distress. For most of the twentieth century, the hospital fulfilled this responsibility tolerably well. The voluntary hospital, in particular, devoted substantial energies to that task, and — aided by such considerations as a shared religious impulse; common values among doctors, nurses, and patients; and a generally intimate and familiar environment — it fulfilled that task.

Since the middle of this century, however, the hospital's performance as caretaker has weakened. The hospital setting has become more alien and formal and the institution's ability for — and possibly its commitment to — caretaking has declined. In the process, middle- and upper-class patients have learned — and accepted — the fact that hospitals are strange places, to be relied on for their technological skills but avoided for everything else.

The result of these two developments points the future of the hospital in a curious direction: patients with options are coming to depend on the hospital exclusively for its advanced medical technologies; those without options are increasingly dependent on it for social services. If this situation continues, and by all indications it is likely to do so, the hospital of the future will be a technologically sophisticated intensive care unit and operating theater sitting atop a relic of the almshouse.

Evolution of the Almshouse

Throughout the nineteenth century, as Charles Rosenberg points out elsewhere in this issue, the hospital's primary function was to serve as caretaker to those enfeebled by age, disease, vice, or injury. Its patients — more accurately, its inmates — were unable to sustain themselves or to call on the support of family, friends, or sectarian relief agencies. In essence, they were dependent and alone. The most important service that the hospital performed both for these hapless individuals and for the larger society was to provide a roof, a bed, and food. Only incidentally might a hospital/almshouse call on a physician to treat an inmate's ailment — a request that physicians generally honored because they were salaried to do the job, because this act represented their own charity, or because they needed patients on whom to teach medical students requisite skills. Indeed, serving a population that was by definition deviant, the nineteenth-century hospital was more concerned with moral reform than with

therapeutics, and with training inmates to habits of good order than with curing their physical illnesses. The rules of nineteenth-century hospitals are hardly distinguishable from those of contemporaneous juvenile reformatories and penitentiaries.[1] All of these institutions sought to inculcate habits of discipline, temperance, punctuality, and hard work.

At the opening of the twentieth century, the hospital, in an almost unique turnabout, became one of the most celebrated institutions. In 1870, the only patients at a hospital's lying-in section would have been prostitutes, runaways, and single women about to give birth to illegitimate children. By 1910, middle-class and upper-class women living in metropolitan areas accepted the hospital as the preferred place for childbirth.[2] In more general terms, until 1900 the poor had a monopoly on hospital beds; by the 1930s, however, middle- and upper-class patients outnumbered them, and health policy analysts were decrying the fact that the poor had too little access to the facilities.[3] The reasons for this shift from almshouse to temple of science have received some, but not sufficient, analysis. This change in the hospital's image and in society's attitude toward hospitals predated their therapeutic efficacy; in fact, their new reputation reflected more of the promise of science and medicine than actual performance. But whatever the causes, instead of a place to be avoided, the voluntary hospital had become the setting of choice for the treatment of disease among the middle and upper classes.

Through the 1950s, the hospital defined its caretaking responsibilities to these patients broadly and pursued those responsibilities energetically. Although no generation has ever been altogether content with the hospital's response to the patient as a person — one certainly finds complaints about excessive formality and coldness in the 1920s and 1930s — nevertheless, medical and lay persons were generally satisfied with its performance.[4] Underly-

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1. Morris Vogel, *The Invention of the Modern Hospital: Boston 1870–1930* (Chicago: University of Chicago Press, 1980), Chapter 1; David J. Rothman, *The Discovery of the Asylum* (Boston: Little, Brown, 1971).

2. Judith Walzer-Levitt, *Brought to Bed: Child-Bearing in America 1750–1950* (New York: Oxford University Press, 1986), pp. 73–83.

3. I.S. Falk, Margaret C. Klem, and Nathan Sinai, *The Incidence of Illness and the Receipt and Costs of Medical Care Among Representative Families* (Chicago: University of Chicago Press, Publications of the Committee on the Costs of Medical Care, No. 26).

4. Charles E. Rosenberg, *The Care of Strangers: The Rise of America's Hospital System* (New York: Basic Books, 1987), pp. 152–153, 311.

ing and facilitating the hospital's attentiveness to these responsibilities were a number of factors, including the character of its sponsors and funders, the location and size of the facilities, and the state of therapeutics. Of all of them, perhaps the most significant was the number of sectarian and ethnic-sponsored hospitals, especially in eastern and midwestern cities. For reasons that are readily understandable, these institutions took the satisfaction of patients' nonmedical needs as one of their primary missions.

Sectarian Institutions Proliferate

Although everyone remembers that religious orders founded the first hospitals, the Hôtels Dieu of the medieval period, it may be forgotten that the religious impulse continued to underlie hospital foundation in the United States, for example, well into the twentieth century. The religious sponsorship had import not only for the way the hospital was financed but also for the way it was staffed and run. This fact may be obscured when the case in point is a Protestant hospital in a Protestant country. The sectarian influence emerges more starkly in Catholic and Jewish facilities and, hence, the evidence that follows draws from their experiences.

The importance of the sectarian hospitals is readily apparent in the spread of Catholic facilities. By 1930, there were some 640 Catholic hospitals in the United States, representing one-seventh of all non-governmental hospitals in the country.[5] The great majority of them opened between 1880 and 1915, operating not only in major urban areas but in small towns. The Catholic Hospital Association (CHA) took pride in the fact that in 1933 "there was available one bed . . . for every 231.2 of the Catholic population," half the ratio of hospital bed to persons in the general population.[6] In fact, in some cities with a large Catholic population, the ratio of Catholics to beds dropped below two hundred to one. In Baltimore, the figure was 128; in Chicago, 170; in St. Louis, 135; and in Cincinnati, it was one hundred and ninety-five.[7] Other groups followed the Catholic example. In New York City in the period 1925–1945, 60 percent of the 58 general hospitals had religious

5. Alphonse M. Schwitalla and M. R. Kneift, "The Catholic Hospital of the United States, Canada, and Newfoundland at the Beginning of 1934," *Hospital Progress,* 1934, *15*:69–71, 74–75; Alphonse M. Schwitalla and M. R. Kneift, "Hospital Statistics of the United States," *Hospital Progress,* 1934, pp. 81–93.

6. Ibid.

7. Ibid.

sponsorship (most of them Catholic or Jewish), and controlled 64 percent of the general hospital beds.[8]

Moving westward (where one might think the influence of religion lessened), Cincinnati in 1924 had nine general hospitals, of which four were sponsored by Protestant groups (chiefly Methodists), two by Catholics, and one by Jews. That year, in Cincinnati, 308 Catholic patients entered a hospital, and 165 (54 percent) of them chose one of the two Catholic hospitals; so too, 54 (76 percent) of the 71 Jewish patients entered Jewish hospitals.[9] To be sure, Catholic and Jewish hospitals served populations other than Catholics and Jews — the CHA estimated that 49 percent of its patients were non-Catholics — and not every member of a religio-ethnic group patronized the group's own hospitals. But the CHA estimated that a majority (51 percent) of Catholics *did* use the group's hospitals, and the figures may have been slightly higher among Jews.[10]

Religious and ethnic communities built and frequented their own hospitals for many reasons. First, they were self-consciously offering a gift to American society, paying tribute and demonstrating allegiance to American values. As supporters of New York City's St. Vincent's Hospital candidly admitted: "The unanswerable argument of selfless charity remained the greatest single factor that dispelled prejudice against the Catholic Church."[11] In fact, if a hospital appeared to the community-at-large to be too exclusive, the sponsors became uncomfortable — which was why, in 1866, New York's Jews Hospital, which admitted patients regardless of religion, changed its name to Mt. Sinai Hospital.[12]

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8. Ibid.

9. Among Protestants, the figures were lower, for those in the majority did not have such strong incentives as those in the minority. Mary Hicks, *Hospitals of Cincinnati, A Survey* (n.p., 1925), Chapter 2 and pp. 51–53; see also *The Story of the First Fifty Years of Mt. Sinai Hospital 1852–1902* (New York, 1944).

10. Schwitalla and Kneift, "The Catholic Hospital of the United States"; Schwitalla and Kneift, "Hospital Statistics of the United States"; see also Haven Emerson, *The Hospital Survey for New York*, vol. I, (New York, 1937), p. 36; E. H. Lewinski-Corwin, *The Hospital Situation in Greater New York* (New York, 1924).

11. Sister Marie de Lourdes Walsh, *With a Great Heart: The Story of St. Vincent's Hospital . . . 1849–1964* (New York, 1965), pp. 32, see also pp. iv–v, 4–5, 33–34, 106–107.

12. *The Story of the First Fifty Years of Mt. Sinai Hospital, 1852–1902*, pp. 4–5.

Meeting More Than Medical Needs

However, more than community good will was at stake; an immediate self-interest operated as well. For minorities, each hospital also represented a place in which the group's members could learn and practice medicine, and in an era when prejudice against Jewish and Catholic applicants to medical schools and residency programs at prestigious hospitals was widespread, this opportunity was of critical importance. The sectarian hospital, then, was an investment in professional careers for those who might otherwise be excluded from medicine; this meant, of course, that in these hospitals, the sick were most likely to be treated by fellow ethnics or co-religionists. Patients and doctors would thus share language, traditions, and values.

These hospitals also had very self-conscious nonmedical missions. Part of their purpose was frankly protective, to make certain that co-religionists did not come under the influence of alien institutions whose manifest purpose was to care for the body but whose latent purpose might be to proselytize. Catholics and Jews, for example, shared a deep suspicion that behind every Protestant institution that intended to do good lurked the fantasy of conversion — and in certain instances, such as child welfare, their fears were not unreasonable. Accordingly, sectarian hospitals aimed to keep their patients out of harm's way, in spiritual as well as in physical terms.

These sectarian hospitals, more than their non-sectarian counterparts, boasted of serving the human as well as the medical needs of their patients. Catholic facilities in the pre-World War II period, for example, explained precisely what made them Catholic in these terms: only on *their* wards would nursing sisters be on hand to comfort patients as well as to make certain that infants who might not survive would be baptized (and therefore spared the rigors of purgatory); only in Catholic hospitals would priests always be available to give extreme unction; only on their walls would patients find the crucifix along with paintings that expressed "the deepest Catholic piety."[13]

Indeed, the sectarian hospitals were confident that their religious and social orientation made them better hospitals, for it encouraged the practice of what they labeled "humanistic medicine," that is, the care of both body and soul. Their emphasis on the

13. Rev. Edward F. Garesche, "Christian Culture in the Whole Hospital," *Hospital Progress,* 1925, 6:432–434.

spiritual well-being of the patient prompted them to look beyond the treatment of disease to the more general condition of the patient, with all sorts of beneficial results. As one Catholic physician insisted, it was not enough to prescribe a medication and ignore the person; the patient could not be effectively treated "as though he were nothing but a 'curiously developed lump of matter.' "[14] Or as one Catholic clergyman explained: "The sweet influence of religion has ever been the means of dispelling the nervous gloom of the patient, so dangerous to his physical recovery."[15] Whether or not one links such an outlook to the therapeutic helplessness of medicine in these decades — and assumes that doctors talked about the soul because they could do so little for the body — it surely helped to make caretaking a highly valued undertaking in the Catholic hospitals.

Similar motivations accounted for the establishment of Jewish institutions as well. Beth Israel Hospital, for example, was founded in 1900 on New York's lower East Side, first, to meet "the great necessity of having a hospital convenient to the crowded tenement district of this part of the city (the hospital as caretaker to the poor); second, to have a hospital that should be conducted on strictly orthodox principles in its kitchen as well as in other respects (the hospital as caretaker to its own)."[16] In this way, the hospital's backers made certain that the Orthodox Jew "was not left to suffer the pangs of outraged feeling when circumstances required his hospitalization."[17] Only in a Jewish hospital would the patient be certain that he would find kosher food on his tray and have the opportunity to join a group in daily prayer. And only in a Jewish hospital would a Yiddish-speaking patient be assured that in a time of grave illness the doctor would know the right language and phrases with which to communicate information. Thus, without exaggerating its effects or romanticizing its influence, patients from all social classes experienced the sectarian hospital as more familiar and personal than alien and formal.

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14. Peter Joseph Barone, "Practical Advice by a Catholic Doctor," *Hospital Progress*, 1923, 4:177.

15. John P. Boland, "Religious Aspects of Sisters' Hospitals," *Hospital Progress*, 1921, 2:285.

16. Tina Leviton, *Islands of Compassion: A History of the Jewish Hospitals of New York* (New York: Twayne Publishers, 1964), pp. 89–91, 113.

17. Ibid.

Community Hospitals Keep Care Close to Home

Many of the attributes of the sectarian hospitals reappeared in the numerous small voluntary and proprietary hospitals that served local communities and neighborhoods before the 1960s. Once again, the organization of these institutions encouraged and facilitated caretaking. Typically, the individual hospital had less than one hundred beds and was likely to be class- and race-specific — serving the well-to-do in well-to-do neighborhoods, and the lower classes in lower-class neighborhoods. Whatever inequities were fostered, such arrangements helped make the institutions familiar and comfortable to their patients; and patients, accordingly, sought them out. In 1933, for example, 89 percent of the patients in hospitals in the borough of Queens were from Queens, and Brooklyn residents accounted for 88 percent of patients in Brooklyn's hospitals. The comparable figure for the Bronx was 85 percent and for Staten Island, 98 percent; only in Manhattan did the percentage drop to sixty-two.[18] Moreover, the staff for these facilities were generally composed of local doctors — attending privileges were not too difficult to obtain. Indeed, it was part of the purpose of the Hill-Burton Act (1946) to make certain that patients went through the crisis of illness in a physical and social environment that was altogether recognizable. Rather than build one large regional hospital, Hill-Burton encouraged the building of multiple and scattered hospitals on the premise that closer was better, that patients ought not to have to receive care in a distant and unfamiliar setting.

Less Concern about Low Occupancy and Long Stays

With homogeneity and intimacy such major considerations, the idea of a "surplus bed" did not carry then the meaning that it carries now. To be sure, hospital administrators and policy analysts were conscious of occupancy rates, analyzing the occupancy percentages of different types of hospitals and the changes that occurred over time; they, too, fretted about an excess of empty beds. But the degree of anxiety was markedly lower and the definition of excess much more relaxed than that which currently prevails.

Over the 1920s and 1930s, the larger voluntary general hospitals typically had occupancy rates of 60 percent of capacity, about 10 percent below the standard proposed in the health policy litera-

18. Emerson, *Hospital Survey for New York,* p. 31.

ture of the time.[19] An ideal occupancy rate of 70 percent was not a particularly demanding standard, and the fact that the voluntary hospitals did not attain it was met with complacency.[20] In part, this attitude reflected an absence of pressure from third-party payers — no federal bureaucrats insisted that hospital administrators become more efficient in using beds or examined rates of occupancy before issuing a certificate of need to expand. But the complacence also reflected a definition of the hospital bed as a resource that should be readily available in advance of need as opposed to always in use. The CHA was proud of its low ratio of bed to co-religionist and not at all concerned about a relatively low occupancy rate (57.5 percent), precisely because a Catholic who suddenly needed a bed had to have one ready; otherwise, he might end up in another denomination's institution. So too, a community resident was not expected to have to enter a facility located at a distance. With familiarity so dominant a consideration, an open bed was not a surplus bed but a bed on hand to meet unexpected need.

In this sense, strict measurement of surplus beds assumes an interchangeability of parts: a hospital bed is a hospital bed. In an earlier era, the perspective was quite different: A bed in a Protestant hospital was not a suitable bed for a Catholic or a Jew; a bed one hundred miles away was not a suitable bed for a neighbor. On the surface, a term like "surplus bed" seems to be value-free, an indicator of utilization of space that is neutral in its measurement. But, in fact, the term is value-laden, reflecting very particular and contemporary assumptions about where and how health care should be delivered.

Another major characteristic of pre-1960 hospitals that facilitated caretaking was the longer length of patient stays. Nationally, in 1924, the average stay in general hospitals (excluding newborns) was 11.3 days in voluntary hospitals and 15.5 days in municipal institutions; in New York, the respective figures were 12.2 and 17.8 days — longer lengths of stay seem to be a New York tradition.[21] Stays also varied for different diseases; it was not unusual, for

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19. Emerson, *Hospital Survey for New York*, p. 29; Haven Emerson et al., *Philadelphia Hospital and Health Survey — 1929* (Philadelphia, 1929), pp. 574–579; Michael M. Davis, "Are There Enough Beds? Or Too Many?" *The Modern Hospital*, 1937, *48*:149–152.

20. Ibid.

21. Hicks, *Hospitals of Cincinnati*, p. 95; Emerson, *Hospital Survey for New York*; Emerson et al., *Philadelphia Hospital and Health Survey — 1929*, p. 575.

example, for cardiac patients to spend several weeks in the hospital. The extended periods of hospitalization testified to the limited weapons in the medical arsenal — myocardial infarctions were treated with bed rest and not much else — and an availability of beds that made triage on the basis of severity of illness unnecessary at the front door.[22]

The effects of long stays went well beyond administrative convenience. For example, when patients remained in a hospital for weeks rather than days, a patient subculture flourished, and one of its many results was to lessen the alien nature of a hospital experience. Patients became guides for each other, most dramatically perhaps, as Sheila Rothman has been finding, in tuberculosis sanitoriums, but also to some degree in acute care hospitals as well. The conversations among patients may not have lasted quite so long as Hans Castorp's on Thomas Mann's "magic mountain," but the conversations served effectively to introduce and explicate the hospital to newcomers — all the more effectively when the conversations were between fellow ethnics or members of the same social class and neighborhood. In addition, with longer periods of stay, physicians themselves had greater opportunities to talk with patients, and, although the evidence is largely anecdotal, they may well have done so.

Several caveats are immediately in order lest the argument be misconstrued to imply a nostalgia for a golden age in the pretherapeutic past. Almost all of what has been described here took place on the private and semiprivate hospital floors of voluntary hospitals, not on the wards, and not as frequently in university hospitals. Nevertheless, it is still appropriate to recognize that for a major part of their history, voluntary hospitals wanted to, were expected to, and actually did deliver care in more intimate ways to a relatively homogeneous group of patients. Not that anyone would wish for a return to a class-stratified, ethnically exclusive, and therapeutically weak institution. Rather, the point is that hospitals were once more deeply in the enterprise of giving *care* than they are now, and it is vital to understand why they reduced their commitment and what the consequences have been.

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22. As difficult as it may be now to imagine, patients — and not infrequently celebrity patients — would check into the hospital for a week or two of "rest" for "exhaustion." Today, however, there is no such category as "exhaustion" among Medicare's diagnosis-related groups, nor is there likely to be one.

Reorientation of the Hospital

Just as any other institution, the hospital responds to a variety of external and internal considerations. The design and structure of its operation will inevitably reflect the influence of broad social trends and specific government regulations, as well as changes in medical technology and in the training and ambitions of its personnel. All of these considerations are relevant to an understanding of the reorientation of the hospital away from caretaking responsibilities. A full analysis of the many causes and implications of this change is well beyond the scope of this essay, but at least some of the major determinants can be identified.

One of them, perhaps surprisingly, was the enactment of Medicaid and Medicare in the 1960s. Although the effects of these federal programs on hospital finance and the access of the poor to health care have been well traced, much less is known about their impact on the internal functioning of the hospitals and on their daily routine. It would appear, however, that the impact has been considerable.

The Role of Federal Regulations

First, federal regulations accompanying Medicare and Medicaid may well have helped to alter the character of nursing staffs, most obviously in sectarian hospitals, especially Catholic hospitals. Under these regulations, the federal government insisted that in order to qualify for reimbursements all hospitals must satisfy elaborate Conditions of Participation, which included rigorous training standards for nurses that placed more emphasis on educational achievements than on hands-on experience.[23] It was professional degrees that counted — and not infrequently, the sister-nurse or the good-hearted amateur who had cared for patients over the years had to be sent to school to get the requisite credentials. Coincidentally, this process of certification came at the very moment when Catholic orders were experiencing a profound upheaval in the aftermath of Vatican II; sisters were leaving the orders in large numbers and new recruits were not filling their places. All of this meant that in the hospital the nursing sister whose mission had been to care for the

23. Edmund N. Pellegrino, "The Catholic Hospital: Options for Survival," *Hospital Progress*, 1975, 42–52; Stephen M. Blaes, "Reimbursement Problems of Catholic Hospitals," *Hospital Progress*, 1975, pp. 46–54.

sick was giving way to the professional nurse who had mastered the appropriate techniques. This is not to say that skill and compassion are necessarily in conflict or that nursing schools had not been graduating trained nurses for many years. Rather, under Medicare the federal government was now establishing uniformity among hospitals, and in the process, helping to promulgate a subtle shift in the ideal of the nurse from one who ministers to one who has technical expertise. Put another way, the nurse at the bedside in Catholic institutions was less likely to be dressed in a habit, and even less likely to insist on calling in a priest.

Second, Medicare benefits allowed elderly patients to select their own hospitals, and many of them took advantage of the opportunity to go from public to voluntary, not-for-profit facilities. The voluntary hospitals themselves, facing a fiscal crisis of no mean proportion (whose origins rested partly with low occupancy rates), hesitantly, at first, and then more enthusiastically, welcomed them. In this way, the voluntaries swelled their patient rosters and, inadvertently, may have sparked something of a competition for beds, with the winners those patients with the most serious symptoms and complaints.

At the same time, the first federal concern with hospital admissions and lengths of patient stays emerged (through peer review mechanisms), putting a premium on a higher severity of illness to justify admission. The result may have been a patient load in the larger and urban hospitals that was more acutely ill than before; the evidence is, and will probably remain, more impressionistic than firm, but the effect of Medicare may have been to promote a case mix that requires more intense and time-consuming treatment. Thus, the hospital, for reasons that were not entirely anticipated, was moving from a craft model to an assembly-line model.

The shift was probably over-determined. As competition for beds increased and utilization reviews became more stringent (disallowing some of the costs of patient care), the length of patient stay dropped. As time became of the essence, it now became appropriate, really for the first time, to insist that one criterion of medical service become efficiency and speed. In the process, patients' values and preferences, their nonmedical needs, inevitably declined in prominence.

The Influence of Technology

Advances in medical technology also encouraged this change.[24] Not only is medicine able to do more for patients today, but it must do so on a tighter schedule. The prototype may well be cardiac disease. In the 1930s, hospitals and staffs had little more to offer than comfort and nursing. In the technologically intensive 1980s, however, they closely monitor the patient, dispensing medications that alter cardiac output and blood pressure levels and must, perforce, be checked and altered over the course of minutes, not hours or days. Physicians and nurses move quickly from one patient to another, their energy devoted largely to — and perhaps monopolized by — the scrutiny of data and the administration of drugs.

The use of technology has also rendered the patients' conversation, including their report of symptoms, medically less interesting. Older attending physicians have a series of aphorisms designed to counter this fact. On rounds they will counsel: "Always take a tip from the jockey," or "Go where the pain is," but these are rear guard actions, listened to more or less politely by younger physicians who tap their feet with all the patience of a city road-runner waiting for the traffic light to change. For indeed, the patients' reports are often less informative than what magnetic resonance imaging can reveal about that numbness in the arm or what the Swan-Gans (a soft, flow-directed catheter with a balloon tip, used in monitoring blood flow) indicates about congestion in the chest. The print-out has the additional advantage of being easy to read, not requiring any mastery of a foreign language.

But rather than belabor the direct effects of the technological revolution on medical institutions and practices, it may be more useful to note several critical indirect effects. Technological advances have shifted the emphasis from ethnic or class identity to skill and talent. As the substance of medical decision making has become more complex, neutral standards of judgment in selection of residents and physicians have become more commonplace. The march of science is not alone responsible for this shift, but it has certainly encouraged it. Mastery of the machines of contemporary

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24. It has become something of a cliche to blame technology for the abandonment of the patient as a person, but such a claim both ignores all the other factors working in the same direction and attributes too much influence to technology itself. It also seems to absolve everyone of blame: if the fault lies with technology, seemingly it is above and beyond our control.

medicine is now more important than identification with the hospital's social or ethnic preferences; the religion of the chief of cardiology is far less interesting to hospital trustees than his technical skills. Rarely does one hear stories today about qualified Jews or Catholics being turned down for appointments because of prejudice. Yet, to turn this same point around, it is now far less likely that the patient and his doctor will have very much in common or that either will know how to get over the barriers that may separate them.

Discontinuity of Care

Even where a patient in the community develops a personal relationship with a primary care physician, hospitalization will often disrupt it. The physician may not have privileges at the tertiary center; in all events, the patient's care may often be in the hands of specialists and sub-specialists who not only are strangers to him but who work in fields whose names he does not even recognize. How many parents, for instance, know a neonatologist or can even pronounce the term? And even should the patient's primary physician have privileges at the hospital and be in a position to help interpret the findings (which is far from assured), the patient will still be faced with strangers who are speedily and matter-of-factly carrying out invasive procedures. These physicians will not only have little time to counsel and comfort, but truly will have little idea of who is in the bed or what would constitute genuine comfort. In short, meritocracy, which now rules in most hospitals, substitutes an expert for a fellow ethnic or co-religionist and, in the process, makes caretaking both less relevant to the enterprise and more difficult to fulfill.

Although this sort of analysis has often prompted jeremiads about the physician's failure to cultivate humanistic sentiments, patients, too, share responsibility for encouraging these changes. Those who are gravely ill and have the means and knowledge will generally seek care in facilities with the most advanced medical machinery, where technology reigns. Given a choice between the familiar and the therapeutic, they opt for the therapeutic. The occasional exception, such as the elderly parent who prefers his neighborhood or ethnic hospital, is likely to find himself in a fierce and generally losing battle with his children who will insist that he enter the most sophisticated tertiary care center. In part, the patient's preferences reflect an obvious desire to wage the most effective war

against disease. However, in part, they also reflect a general decline in individual loyalties to religious or ethnic institutions. Being nursed by a sister or having kosher food on the hospital tray simply does not have the emotive power or comforting quality for a third-generation suburban American of Italian or Jewish descent that it had for the first-generation ghetto resident. In much the same way, loyalty to the neighborhood institution has also weakened, at least in more prosperous communities.

Changing Attitudes Take Their Toll

It is increasingly difficult for hospitals with limited services or those appealing to particular religious or ethnic groups to stay afloat. Data on hospital closures confirm this point. In New York City, for example, between 1963 and 1978, 35 hospitals closed, and they were, typically, smaller facilities offering only a limited range of services.[25] These hospitals were also the victims of demographic shifts that occurred during the 1960s. As a United Hospital Fund study concluded, "The communities for which these institutions had been established — generally comprising either the educated and affluent or immigrants of a single particular ethnic group — had vanished in a massive turnover of population."[26] Not surprisingly, half of the voluntary hospitals that closed in New York City were Catholic or ethnic ones, and no public protest or complaint greeted their disappearance. In effect, communities are adjusting to the fact that seriously ill patients will have to travel to a central hospital.

Yet, all of these points notwithstanding, those patients with sufficient resources have in crucial ways demonstrated their discomfort with the current state of affairs, most notably by preferring, whenever the cost in medical outcome would not be too great, to have services delivered outside the hospital setting. As important as is the question of whether the for-profit or the voluntary sector will control the health facilities of the future, equally if not more important is the question of where health care will be delivered: in the home, in the shopping center, in doctors' offices, or in the hospital? All indications are that the answer will be everywhere

25. Karen M. Pleines, "Hospital Closures: The New York Experience," in United Hospital Fund, *Proceedings of the Health Policy Forum on Hospital Closures in New York City,*" 26–27 October 1978, (New York: United Hospital Fund, 1980), pp. 24–25.

26. Ibid., p. 25.

except the hospital, unless complex surgery, intensive care, or experimental medicine is required. Perceiving the hospital as alien and uncaring and its doctors as strangers, patients who have options will do all they can to avoid a hospital stay or to be discharged as quickly as possible.

Evidence of a "debundling" or deinstitutionalization of health care delivery abounds. Few readers of this article who were given a choice by a physician of spending an extra day in the hospital or recuperating at home would choose to remain in the hospital. Indeed, that they *ought* to go home is a lesson being taught repeatedly in the popular press. A column by Jane Brody on "Personal Health" in the *New York Times* ran under the banner: "In general, patients heal faster and feel better when they are cared for in a home setting." And although no data supported the observation, the Brody column confidently noted that "experts . . . say that home health care fosters a greater sense of wellness."[27] In this same spirit, Meg Greenfield published a widely syndicated essay about "The Land of the Hospital." She explained that she had "just come back from a foreign place worth reporting on . . . a universe, really of its own," where one is "a tourist in an unfathomable, dangerous land." For Greenfield, the hospital was the epitome of our high-tech institutions, at one with organizations like the National Aeronautics and Space Administration, representing "a maddening combination of individual excellence and systemic incompetence." In sum, Greenfield's message was simple: Go there if you must, be on guard constantly, and recognize that as the hospital is saving your life and limb it is simultaneously putting you at "mindless risk."[28] And when they have no choice, patients will get ready for a hospital stay in the Greenfield style, the way travelers equip themselves for a trek. They prepare their own food, organize family and friends to provide the necessary labor, and bring along all necessary personal identification — from hanging graduate school diplomas on the walls to pasting up pictures of the children in an effort to communicate with an unknown hospital staff that they are persons who are valuable and valued in this society.

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27. Jane E. Brody, "Personal Health," *New York Times*, 22 January 1986, Section C, p. 4.

28. Meg Greenfield, "The Land of the Hospital," *Newsweek*, 30 June 1986, p. 74.

The Deinstitutionalization of Care

As a result of such attitudes, and with the help of technology, out-of-hospital facilities and home health care devices are burgeoning. Birthing centers and surgicenters are proliferating and so are visiting nurse programs; by one estimate, home health care already represents a $14 billion annual industry.[29] While third party reimbursement schedules have to date resisted the trend, sooner or later their reluctance to pay for these types of services will end.

The hospitals, not unaware of these attitudes and prospects, and in competition for patients, are attempting to implement some corrective measures. They advertise new amenities: valet parking, low-cholesterol French cuisine, scenic views, brightly lit rooms. But it is doubtful that these campaigns will make much difference, other than perhaps in capturing an occasional patient who might have gone to a competitor's facility. Aware of their limited ability to change the style of their operations or to alter the preferences of patients, hospitals themselves are joining, somewhat frantically, in the deinstitutionalization trend. They are opening their own surgicenters, adding off-site facilities, and organizing executive health plans and track clubs for cardiac patients. In the language of the marketplace, hospitals are busily diversifying — and are likely to continue doing so.

However, one should not take this scurrying about for new sources of patients and income too seriously. Most probably, the claim of the voluntary hospitals to significance will rest with their ability to perform difficult surgical techniques, to administer experimental medicines, and to provide intensive care units. Hospitals will attract those patients who need medicine of the twenty-first century. Insofar as their private floors are concerned, hospitals' future lies with technology, with medicine on the frontier. Along the way they may try to compete with health maintenance organizations (HMOs) and pursue inventive marketing strategies, but they are unlikely to alter in significant ways the style of inpatient services.

In the end, the hospital of the future is unlikely to be a very caring or attractive place to the sick who have resources of their own. These patients, whenever the opportunity presents itself, will not choose the hospital over an alternative community setting. And

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29. "Staying Home, Feeling Better," *Newsweek*, 7 July 1986, p. 48.

when for overriding medical reasons they have no choice, they will want to enter and leave the facility as quickly as possible.

Beneath the New Technology: the Almshouse Remains

Caring for patients with resources of their own constitutes only one part of the hospital's universe. The hospital also serves the sick poor, the medically indigent — and in that regard the situation is remarkably different.

Even though the hospital shed its almshouse reputation in the opening decades of the twentieth century, it has continued to have a particular responsibility for the sick poor. Through the mid-1960s, the entire public hospital system and a fluctuating but generally significant percentage of ward beds in voluntary hospitals were to provide free medical care for the indigent — although the care was certainly less than adequate in terms of quality and availability. The stigma and discomfort of being one patient among 12 or 14 on a ward was considerable and the hassle to see a doctor in an outpatient clinic great enough to keep down the number of visits. But this was hospital charity, and like all charities of an essential sort, it spoke better of those who gave it and less well of the social system that made it necessary.

With the implementation of Medicaid and Medicare, government underwriting made the delivery of health care to the poor easier to fulfill — particularly for Medicare patients, who brought with them higher levels of reimbursements. While the Medicare patients used their credit cards in the voluntary hospitals, the great majority of the Medicaid population, as well as the uninsured poor and undocumented aliens, kept many, albeit not all, of the public hospitals filled.

Income Influences Attitudes

By every indication, all of these categories of elderly and poor patients will continue to be especially dependent on hospital services, presenting themselves in significant numbers not only at public hospitals but at urban voluntary hospitals as well, especially those located in or on the border of economically depressed areas. As compared to patients who are younger and wealthier, the elderly and the poor are more likely to require hospitalization when arriving at emergency rooms and will have longer lengths of stays per

diagnostic category. If the more privileged patient will do all that is medically reasonable to avoid or shorten a hospital stay, the poor and many among the elderly are far less reluctant to occupy or to remain in a hospital bed. A 1985 Harris Poll, conducted for the Commonwealth Fund, found that 18 percent of those with incomes under $25,000 had been a patient in a hospital during the past year; among those with incomes over $50,000, the figure was 8 percent.[30] In this same survey, only 2 percent of whites but 18 percent of Hispanics believed that their hospital stay had been "too short." In other words, the hospital's caretaking function may not be of particular interest to patients with ample resources but it is of acute importance to patients who by reason of age or income command less in the way of personal resources.

There is nothing puzzling about this difference. However understaffed, neglectful, alien, regimented, noisy, and lacking in privacy middle- and upper-class patients may find a hospital, those from less comfortable circumstances will judge the setting by very different standards. Someone who faces a choice between a cold-water fourth-floor walk-up flat and a bed on a ward will reasonably decide that his recovery will progress better in a warm place where he is fed, nursed, and medicated, however sporadically. By the same token, very elderly patients, competent enough to be aware of their limitations, may well prefer the hospital environment, as routinized as it may seem to others, because it is a more protective setting. Hence, it is entirely logical that length of stay for Medicaid patients in public hospitals has been and continues to be higher than for privately insured patients in voluntary hospitals. It is also to be expected that the poor will rate hospital services more favorably than the well-to-do. A poll by Roper and Associates, for example, found that 59 percent of those at the bottom of the economic scale (generally unskilled workers) thought hospitals were doing a "good job," while only 45 percent of those at the top of the scale expressed that opinion.[31] More specific questions demonstrated these same differences: 21 percent of the poor but only 14 percent of the well-

30. Louis Harris and Associates, "What New Yorkers Say about Their Health Care," Conducted for the Commonwealth Fund, June–October 1985, Study No. 844010.

31. Elmer Roper and Associates, "The Public's Attitudes Toward Hospitals in New York City and Their Financing," May 1958, conducted for the United Hospital Fund, pp. 2–3, 5–6, 14. The full report by Elmer Roper and Associates is two volumes under the same title, on file at the United Hospital Fund, New York City.

to-do rated nursing care very good; 17 percent of the poor but only 6 percent of the well-to-do rated the food "very good."[32]

By all indications, not only patients' preferences but also the tilt of public policy will be toward the use of hospital services by the poor and the elderly, at least to the degree that public policy does not neglect them altogether. At the root of this judgment is a traditional and ever so pervasive distrust of the poor, so that, whenever possible, welfare funds go not to the clients but to institutions. The classic example, but by no means an exceptional case, comes from neonatology, where this attitude seems to dictate that it is better to spend $80,000 in a neonatal intensive care unit to rescue an eight hundred gram newborn than to give $2,500 in welfare and food benefits directly to the expectant mother. Likewise, the argument follows, it is better to expend $25,000 in an adult intensive care unit to bring back from the dead a homeless man found frozen on the streets than to invest in alternative housing or shelter programs. And no matter how likely it appears that home health care may be less expensive than hospital or nursing home care, the policy preference will still be for the in-facility programs. For much of our history, public welfare officials opted for "indoor" (the door being that of the almshouse) rather than "outdoor" relief. Health policy today, and probably for the near future as well, seems unable to break out of this mold.

To be sure, the federal government is likely to make as many reductions as it can in both hospital and community health programs. A prospective payment system has been instituted by Medicare, which is a reasonable response to the escalation of health care costs, but at the same time, new efforts are being made to curtail home health care benefits, which is a far less reasonable response. Thus, just when the hospital is expected to discharge patients more expeditiously, the assistance that might have enabled patients to obtain the necessary home services is to be cut. This squeeze from both ends upon the poor and the elderly seems as heartless as it is shortsighted.

The Fallout from Conflicting Federal Policy

The federal government may be counting on the voluntary hospitals to assume the burden which it is shirking. The physician is likely to

32. Ibid.

balk at the inappropriate discharge of a recuperating patient, no matter what the prospective payment allotment or the hospital budgetary pressures. Somehow or other that patient will have to be served — whatever the shortfall from federal reimbursements — which is another way of saying that the role of the hospital as caretaker to the sick poor may well expand, even as hospitals are deprived of the resources to do the job properly.

Not only the humanity of the hospital will compel it to assume this obligation, but so too will the local politics of the situation; it is one thing to cut dollars from programs on a budget sheet, but quite another to toss a patient onto the street. No voluntary hospital operating in the midst of a lower-class community can dare to be so cold-blooded in its behavior, no matter how justifiable its budgetary concerns. In fact, the community, particularly as its political leaders define and pursue its interests, is now more than ever before dependent on the hospital for a variety of traditional and nontraditional purposes. Not only is the hospital valued for its medical services but for its economic and political resources, too. Often it will be the single largest employer in a lower-class neighborhood, and, hence, community leaders will agitate to make certain that neighborhood residents are receiving their fair share of both hospital beds and, no less important, hospital jobs. So too, local leaders will want the hospital to go fight city hall, exerting its influence to improve the area's schools, sanitation pick-ups, snow removals, and so forth.

None of these demands, no matter how burdensome or nonmedical they may be, can be ignored. Even if the hospital is determined to focus its energies on enhancing its diagnostic and therapeutic skills, it will have to be attentive to the health and welfare demands of those who live on or near its doorstep. Voluntary hospitals, after all, are still, in the broadest sense of the term, charities, the beneficiaries of fund raising drives, and it would be unseemly, even self-defeating, to turn a deaf ear to the needs of its neighbors. And in a day when certificates of need must be negotiated through community boards, city planning committees, and state health bodies, it would be a short-sighted hospital administration that would fail to be attentive to its most immediate constituency.

What we will find then, in many major urban areas if not everywhere in the country, are voluntary hospitals increasingly forced to grapple with two remarkably different types of demands. Patients with resources will expect the hospital to deliver high tech-

nology medicine; indeed, they will have no other motive for coming to the hospital. At the same time, patients without resources will become even more dependent on the hospital for the delivery of social welfare services. The hospital will have to live simultaneously in the twenty-first century and the nineteenth century, perched on the leading edge of science even as it performs basic relief functions. For these reasons, then, the hospital of the future may well look like a shiny and handsomely equipped intensive care unit resting atop an almshouse.

Facing Conflicting Agendas

If this vision is correct, then how are the voluntary hospitals likely to cope? What strategies will they adopt to allow them to carry out such contradictory assignments? How will they manage two agendas that are at such cross-purposes? One strategy — of which we are already beginning to see evidence — may be to encourage policy initiatives that will reduce the dependence of the poor on hospital care. Hospitals may be eager to see the poor enrolled in HMO-type organizations on the theory that such programs will reduce their inpatient days. So too, the hospitals may take part in attempts to seed lower-class neighborhoods with more primary care physicians in the expectation that earlier interventions will mean less hospitalization.

At the same time, some voluntary hospitals, and public hospitals, as well, may try to escape from under the almshouse burden, not by altering health care delivery to the poor but by changing the nature of the hospital itself. Thus, a board of trustees or community may experiment with selling its voluntary hospital or public hospital to a for-profit corporation, as if a change in sponsorship or the abolition of the almshouse will eradicate the problem of poverty and illness. By the same token, some voluntary hospitals are certain to adopt strategies to keep the poor away from their doors, eliminating, for example, emergency rooms and outpatient clinics. These hospitals would be content to run the intensive care units and operating theaters and see if the politics of the situation will allow them to pass over responsibility for the almshouse to some other institution.

All the while, some hospitals will struggle with trying to fulfill both assignments, looking for that chief of service who is able to talk with both microbiologists and social workers and who will manage to find the funds to support both the poor and the research-

ers. In the best tradition of the so-called "superwoman," who fulfills both all her professional obligations and every last domestic responsibility, these hospitals will try to do it all, but at what price and with what support remains to be seen.

Whether any of these tactics will be successful is questionable. Neither HMOs nor a greater number of physicians in the ghettos are likely to improve living conditions to the point where the poor truly have the alternative of receiving care outside the hospital. Eliminating the public hospital at best shifts the burden to the voluntary sector; eliminating the emergency room shifts the care back to the public hospital — all of which may add up to depriving the poor of medical services and sparking extraordinary political conflict. As for an integration of both responsibilities, one is hard-pressed to find medical leaders trained to both scientific and social issues, and medical school education does not seem about to take on this assignment.

Which among the options will be pursued will depend, finally, on the location and traditions of the hospital. The facility that is based in a lower-class urban area and operates under close state regulation is likely to try to do it all — to try to serve the needs of both the poor and the new medical technology — and faces the prospect of fulfilling both assignments inadequately. It may wind up serving both the poor and those who need sophisticated technology badly. Its staff will become two-tiered, with prestige and power going primarily to the ranks of intensive care, while a cohort of second class citizens is left to take charge of the almshouse and fight rearguard actions to capture ever more limited resources. The hospital will be divided against itself, with the possibility that there will be fewer technological breakthroughs in the intensive care unit than we would like and a lower standard of care in the almshouse than we will admit.

Conclusion

If one is to make predictions, it is most likely that the hospital of the future will take the technological route, boasting of its intensive care unit, and doing the bare minimum to prevent its almshouse from becoming a public scandal and community rallying point. The hospital in the year 2000 may turn out to be both a marvel and a nightmare, serving both the very sick and the very poor, representing both the best and the worst aspects of care and neglect — which

may well be in keeping with the rest of our society. Since we tolerate homelessness amid luxury housing — and indeed, in the pursuit of luxury housing often *cause* homelessness — should we hold the hospitals and the health care system to a different standard? Patients who have a choice will come to the hospital when they need its technological wizardry, avoiding it at all other times as their counterparts did in the nineteenth century. Patients without a choice will depend on the hospital not so much for its wizardry, which, to be sure, they will on occasion benefit from, but for its caretaking services, however meager they may have become.

The image is not an attractive one, neither for society, nor for medicine. The social inequities are obvious, the cost to medicine only a little less so. The scenario suggests that medicine will become increasingly technical and less caring, that the prototype will be engineering, not social work. Regrettably, one already finds evidence of that change.

The history of the hospital has been extraordinary, for no other institution has experienced such revolutionary changes over time. Having begun as one of the most stigmatized of institutions, the hospital went on to become one of the most celebrated — and is now surely among the most controversial. We still cannot decide whether emptying it or filling it is our goal, whether we should consider hospitals like welfare rolls and applaud when the census goes down, or like a special resource for which we take pride when utilization goes up. The only safe prediction is that the twists and turns we will witness in the future are likely to be as extreme as any we have already seen.

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Clinical Intensity Versus Cost Containment: Conflicting Pressures on Hospital Care

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Introduction

It is astonishing how many changes have occurred in hospital practice during the past two decades. Consider that 20 years ago a patient admitted to a hospital with an uncomplicated myocardial infarction (the muscular tissue damage to the heart that occurs as a result of blood supply interruption, more commonly known as a "heart attack") would have stayed in a regular ward, not a coronary care unit, and would have remained in the hospital for three weeks, not seven to ten days. Had the patient suffered post-infarctional chest pain, he would not have undergone coronary arteriography (an x-ray picture of the arteries after the injection of a radioactive material into the blood stream), coronary angioplasty (surgery of the blood vessels), or coronary artery bypass graft surgery. And before discharge he would not have had an exercise tolerance test, 24-hour monitoring for rhythm disturbance, or echocardiography (also called ultrasonic cardiography, a record of the position and movement of the walls and inner structures of the heart in relation to adjacent tissue, obtained by charting the echo from beams of ultrasonic waves directed through the chest wall).

Similar changes have occurred for other clinical conditions. The prognosis for premature infants, for example, has improved dramatically, especially for those with respiratory distress, and it is now routine for a two-pound baby to survive, whereas as recently as a decade ago it would almost certainly have expired. This improved prognosis is a result of the development of the neonatal intensive care unit, with its sophisticated monitoring equipment and highly trained personnel. Pregnancy and delivery now allow the options of amniocentesis (a sampling of the amniotic fluid) and sonography to detect fetal abnormalities and fetal monitoring to insure the infant's safety during labor; fathers are encouraged to participate in the delivery process; there is a much higher likelihood of birth occurring via Cesarean, not vaginal, delivery. Partly as a result of

Transactions & Studies of the College of Physicians of Philadelphia Ser. 5, Vol. 12, No. 2 (1990); 175-205
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these changes, infant mortality rates have declined, while the costs of delivery, and of malpractice insurance premiums for obstetricians, have soared.

Equally dramatic changes have occurred in radiology, with the development of computerized tomographic (CT) scans, ultrasound, radio nuclear isotope scans, diagnostic and therapeutic interventions via guided needles and catheters, and magnetic resonance imaging. The ability to perform sophisticated neurologic surgery has been greatly expanded via new high resolution dissecting microscopes.

Other examples of change include the widespread use of organ transplantation; the switch of many elective operations, such as cataract extraction, from hospital inpatient to outpatient settings; the more aggressive and more successful performance of surgery for the elderly; and the ethical dilemmas posed by the ability to sustain life, almost indefinitely, for patients who have no chance of living without intensive life support. These changes — some dramatic and others unobtrusive — have resulted in profound differences in hospital care within a short period of time.

The impetus for these changes resulted from three major processes. First, and most obvious, were the new technologies that permitted such breakthroughs as organ transplantation, improved imaging of the head and other anatomical sites, accurate bedside monitoring of the patient's condition and progress, and assistance of critical physiologic functions. The second force consisted of the cumulative evidence — experimental as well as experiential — that identified lower risk patients and procedures where hospital stay could be shortened (e.g., the post-partum mother, the patient with uncomplicated myocardial infarction) or even eliminated (e.g., outpatient surgery for cataract excision or hernia repair). Moving patients with less intense illness out of the hospital has meant that those remaining within it are fewer in number but more in need of intensive care.

Concentration of illness has been accelerated by the third major force: medical economics. In 1965 the costs of medical care in the United States amounted to $42 billion, or 5.9 percent of the gross national product.[1] By 1986 medical care costs had risen to $458 billion, or 10.9 percent of the gross national product (See Fig.

1. Daniel Waldo, Katherine Levit, Helen Lazenby, "National Health Expenditures, 1985," *Healthcare Financing Review,* 1986, *8*:1–21.

Figure 1.

1).[2] The inevitable pressures that were created to contain these rising costs have themselves changed patterns of hospital care, mainly by shortening the length of stay, eliminating many discretionary admissions, and shifting the site of some procedures to out-of-hospital locations.

Just as it is doubtful that many of these changes could have been predicted with accuracy 20 years ago, predicting what will happen in the next two decades is difficult, if not impossible. Who in the past could have foreseen the development of organ transplantation, the explosive growth of diagnostic radiology and the use of artificial prostheses, or the terrible epidemic of acquired immunodeficiency syndrome (AIDS)? Because none of us can be sure of the future, predictions about what is to come are necessarily limited to extrapolations from current trends. Consequently, these predictions are at best only partially accurate.

The following extrapolations on the future of hospital care are based on certain medical and socioeconomic assumptions:

1. There will be no nuclear holocaust.
2. Epidemics such as AIDS will not sweep through the whole population.
3. No spectacular breakthroughs will occur in the treatment of the common causes of death, such as heart disease, cancer, and stroke.
4. No major economic depression will occur.
5. No major changes will occur in the incentives facing either consumers or providers of medical care. That is, medical care will not suddenly be transformed into either an entirely free good or one that is severely rationed according to price.

2. Ibid.

6. Health and medical care will continue to be highly valued.
7. There will be increasing tension between the pressures to obtain more medical care and to limit expenditures.

Current Trends — And What They Portend

Because investments in medical personnel and equipment are so durable, certain clear trends about such resources are evident. Emerging technologies, on the other hand, can be described, but their eventual impact is harder to predict.

Trends in the Supply of Medical Personnel

During the past several decades, the supply of all categories of health workers in the United States has expanded greatly. While the impressive expansion of physician supply has been well documented, equally dramatic increases have occurred for other health professionals.[3] For example, between 1975 and 1982, while the number of physicians increased by 44 percent, registered nurses increased by 49 percent,[4] health technicians and technologists by 62 percent, and health administrators by 48 percent. The only categories of health workers not sharing in these large increases were nursing aides, orderlies and attendants (whose ranks rose by only 12 percent between 1975 and 1982), and licensed vocational nurses (whose numbers increased by only 7 percent). Although not all of these persons work in the hospital, the overall increase in total hospital personnel during the period 1975–1982 was 38 percent.[5]

These trends have important implications for hospital care. Although the U.S. physician-to-population ratio is comparable to or below that of most other Western countries, the proportion of

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3. Steven A. Schroeder, "A Comparison of Western European and U.S. University Hospitals: Case Report from Leuven, West Berlin, Leiden, London, and San Francisco," *Journal of the American Medical Association,* 1984, *252*:240–246.

4. Although the number of nurses has doubled in the past 30 years, current demand for hospital nurses greatly exceeds supply. The reasons are complex, and include (1) greater intensity of nursing care because hospitalized patients are sicker and require more care than in years past, (2) increased demands on hospital nursing functions, and (3) changing budget constraints that have led to an increase in the number of nursing positions available. See Linda H. Aiken and C. F. Mullinex, "The Nurse Shortage: Myth or Reality?" *New England Journal of Medicine,* 1987, *317*:641–646.

5. American Hospital Association, *Hospital Statistics,* 1971–1983 editions (Chicago, IL: American Hospital Association, 1971–1983).

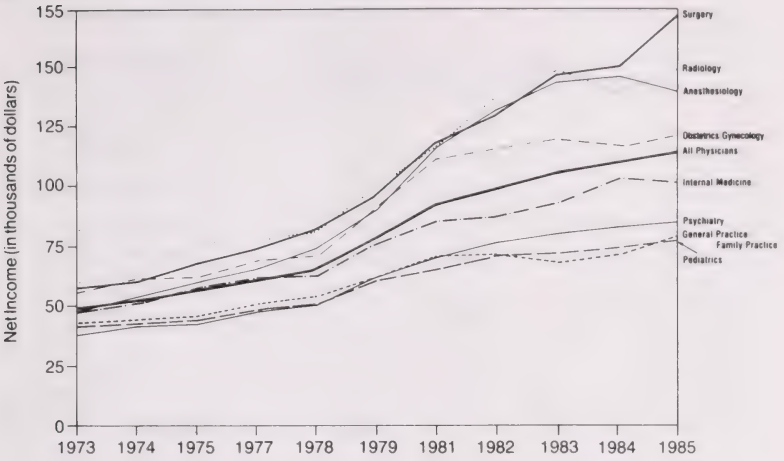

Figure 2.

physicians who are in specialty fields is much higher.[6] The decisions to expand the physician population and to concentrate graduate medical education on specialties have had, and will continue to have, predictable consequences for the American health care system, especially its hospitals. As a result, further stimulation of both the demand for and the supply of technology-intensive diagnostic and therapeutic maneuvers will persist. Another important trend has been the widening gap in payment for physicians' services, with technology-intensive activities being paid increasingly more than time-intensive services. This trend was accelerated both by the political decision to adopt "usual, customary, and reasonable" payment formulas for physician services under Medicare and by the continued development of new medical technologies.[7] It has led to an increasing income differential between those specialties that regularly employ technology, such as surgery, anesthesiology, and radiology, and those such as psychiatry, pediatrics, and family medicine that do not (See Fig. 2).

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6. Steven A. Schroeder, "Western European Responses to Physician Oversupply: Lessons for the United States," *Journal of the American Medical Association*, 1984, *252*:373–384.

7. Jonathan A. Showstack, Bart D. Blumberg, Judy Schwartz, and Steven A. Schroeder, "Fee for Service Physicians Payment: Analysis of Current Methods and Their Development," *Inquiry*, 1979, *16*:230–246.

	NUMBER OF HOSPITALS	NUMBER OF BEDS
1960	5,407	639,057
1970	5,859	848,232
1980	5,904	692,929
1983	5,843	1,021,000
1986	5,728	982,000

*non-Federal short stay hospitals

Figure 3. Supply of hospitals and number of beds, 1960–1986.
Courtesy of American Hospital Association, *Hospital Statistics* (Chicago, IL: American Hospital Association, 1987).

On the other hand, given the less intensive training and greater job mobility of other types of health professionals, such as technicians and computer experts, it is possible that major changes in their numbers can occur. Certainly, the current fiscal pressures facing many hospitals have already had an impact on the job market. It is likely that with this increased emphasis on operational efficiency, jobs in management, especially fiscal management, and in nursing will become more secure, while lesser trained nursing positions and some of the specialized functions, such as respiratory therapy or social work, may be jeopardized. For nurses, this change derives from the greater versatility of nurses compared with the other hospital-based health occupations.

Trends in Hospital Supply

During the past 25 years, there has been a modest increase in the number of hospitals and a much larger increase in the number of hospital beds (See Fig. 3). In 1960, there were 5,407 nonfederal hospitals in the United States, compared with 5,843 in 1983 — an 8 percent increase. By contrast, during the same period, the number of hospital beds increased from 639,000 to 1,021,000 — a 60

percent increase.[8] However, between 1983 and 1986 there was a reduction in hospital capacity. By the end of 1986, there were only 5,728 hospitals and 982,000 beds, decreases from 1983 of 2 percent and 3.8 percent, respectively.[9]

Within hospitals, the most impressive growth has occurred in special care units. In 1960, only 14 percent of acute care hospitals had an intensive care unit; 20 years later, at least two-thirds had such units.[10] Within major academic teaching hospitals, almost one of every eight beds is in an intensive care unit; this is a much higher proportion than exists in comparable hospitals in Western Europe.[11] As the intensity of illness in hospitalized patients continues to increase, there will be growing pressures to create more intensive care units and to expand existing ones in order to care for these complicated and seriously ill patients.

Not only are U.S. hospitals well equipped with intensive care capability, they are also well supplied with diagnostic technology. For example, in 1984 the United States possessed approximately two-thirds of the world's supply of magnetic resonance imaging units.[12] It also had many more CT scanners, operating room suites, and other highly sophisticated medical technologies. Take for an example San Francisco, a city with a population of about 700,000, where coronary artery bypass surgery is performed in seven different hospitals and CT scanners exist in eleven. By comparison, metropolitan London, with over 10 million people, has roughly the same capacity for bypass surgery. In 1979, the United States had 5.7 CT scanners per million population, compared to 1.7 for Can-

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8. American Hospital Association, *Hospital Statistics* (Chicago, IL: American Hospital Association, 1987).

9. Ibid.

10. Lois P. Myers, Steven A. Schroeder, Susan A. Chapman, and Janice Leong, "What's So Special about Special Care? The Definition, Genesis, Cost, and Impact of Special Care Units," *Inquiry,* 1984, *21*:113–127.

11. In 1981 the median percentage of intensive care beds in American university-owned teaching hospitals was 11.4 percent. Figures for European hospitals for the same year were 7.0 percent (Leuven, Belgium), 5.8 percent (West Berlin), 5.7 percent (Leiden, The Netherlands), and 1.8 percent (London). See Schroeder, "A Comparison of Western European and U.S. University Hospitals."

12. Earl P. Steinberg and A. B. Cohen, *Health Technology Care Study: Nuclear Magnetic Resonance Imaging Technology: A Clinical, Industrial, and Policy Analysis,* OTA Publication No. OTA-HCS-27 (Washington, DC: Office of Technology Assessment, U.S. Congress, 1984).

Country	Supply
United States	5.7
Japan	4.6
Canada	1.7
United Kingdom	1.0

Figure 4. The supply of CT Scanners in the United States and other countries (per 1,000,000 population), 1979.
Courtesy of H. David Banta and Kerry B. Kemp, *Background Paper No. 4: The Management of Health Care Technology in Ten Countries* (Washington, DC: Office of Technology Assessment, United States Government Printing Office, 1980).

ada, and 1.0 for the United Kingdom (See Fig. 4).[13] In the intervening years, the gap has probably widened.

Demographic Changes

The "graying" of America will have important implications for hospital care. Elderly people are more at risk for serious illness, more apt to be hospitalized, and more likely to require intensive care. In 1950, 8 percent of the population was age 65 or over; by 1970, the proportion had risen to 9.8 percent; and by 1980, it was 11.3 percent (See Fig. 5). It is projected to reach 12.7 percent in 1990 and 13.1 percent by the year 2000.

Even more impressive are the increases in those aged 85 and over. This group, which accounted for 1 percent of the population in 1980, is projected to double by the year 2000. Those over 85 are also of the age group that consumes the most medical resources per capita.

There are two basic reasons for the increasing proportion of elderly. First, the declining birth rate has meant fewer people in the younger age groups, and, therefore, a higher proportion of elderly persons. This is a phenomenon observed in most Western countries. Second, there has been a steady gain in life expectancy in the United States, resulting mainly from large decreases in death from heart

13. Steven A. Schroeder, "What Can the United States Learn from Other Nations about Health Care Delivery for the Elderly?" in K. Andreoli, L. A. Musser, and S. J. Reiser, eds., *Health Care for the Elderly: Regional Responses to National Policy Issues* (New York: Haworth Press, 1986), pp. 291–306.

	1950	1960	1970	1980	1984	1990*	2000*
Over age 65	8.1	9.2	9.8	11.3	11.8	12.7	13.1
Over age 85	0.4	0.5	0.7	1.0	1.1	---	2.2

*estimate

Figure 5. Proportion of elderly in the United States population, 1950–2000.

Courtesy of National Center for Health Statistics, *Health, United States, 1986* DHHS Pub. No. (PHS) 87-1232 (Washington, DC: United States Government Printing Office, 1986).

disease and stroke. Age-specific death rates from these two conditions declined by 30 to 40 percent between 1965 and 1984 for persons over the age of sixty-five.[14] The facts that there are more elderly people, that they live longer, that they are increasingly sophisticated medical consumers, and that they are the most intense users of medical care, all mean that we can expect continued strong demand for medical services, irrespective of changes occurring in the ways hospitals and doctors are paid.

Projected Trends in the Demand for Medical Care

In addition to demography, another important factor behind the strong demand for health services in the United States is consumer sophistication. Much to my surprise during a year in England and continental Europe, I discovered how little most Europeans expect from their medical care system. By contrast, Americans seem to be extraordinarily well-informed and demanding purchasers of medical services. The American patient is more likely to have read relevant medical information in the newspaper and to have seen it on television, to have his or her own preferences about diagnostic procedures and treatment options, to obtain a second opinion, and to engage in medical malpractice litigation. It is also clear from consumer poll data that American citizens will continue to place a

14. *Statistical Abstract of the United States, 1988,* 108th ed., (Washington, DC: United States Bureau of the Census, 1987).

very high priority on health and medical care, and that interest in and desire for new medical technology will remain high.[15]

Recent changes in financing hospital care, however, might inhibit consumer demand. As payment moves from charge- or cost-based reimbursement to fixed payment per case, hospitals become motivated to reduce expenses. Lower cost health care plans that feature increased coinsurance, co-payments, and deductibles, or that require patients to be screened by gatekeepers before seeing a specialist, will act to reduce utilization of hospital services, as will growing enrollment in health maintenance organizations (HMOs).

It is well known that HMOs hospitalize patients up to one-half as frequently as traditional fee-for-service medicine.[16] HMO enrollment climbed from six million subscribers in 1976 to 21 million in 1985.[17] Some have estimated that as many as 55 million members may exist by 1993.[18] If this prediction holds true, then demand for hospital care can be expected to decline significantly.

In addition, the new emphasis by payers of hospital care on controlling expenditures threatens an end to the practice of cross-subsidization. This practice permitted hospitals to provide some services, such as indigent care, with surplus revenues collected for the care of patients with charge-based insurance payments. As cross-subsidization disappears, the problem of access to hospital care by those lacking adequate health insurance coverage can be expected to increase.

Changing Patterns of Hospital Utilization

Three statistics encompass the important dynamics of hospital volume: admissions, length of stay, and occupancy. Between 1960 and 1980, hospital admission rates increased steadily, rising from 127 per 1,000 population to 159 in 1980, a 25 percent increase in just 20 years (See Fig. 6).[19] However, admission rates have decreased

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15. Robert J. Blendon and Drew E. Altman, "Public Attitudes about Health Care Costs: A Lesson in National Schizophrenia," *New England Journal of Medicine*, 1984, *311*:613–616.

16. Harold Luft, *Health Maintenance Organizations: Dimensions of Performance* (New York: John Wiley & Sons, 1981).

17. Steven A. Schroeder, "The Making of a Medical Generalist," *Health Affairs*, 1985, *4*:22–46.

18. W. Coker, as quoted in "Alternate Delivery," *Hospitals*, 1984, *58*:50.

19. National Center for Health Statistics, 1986.

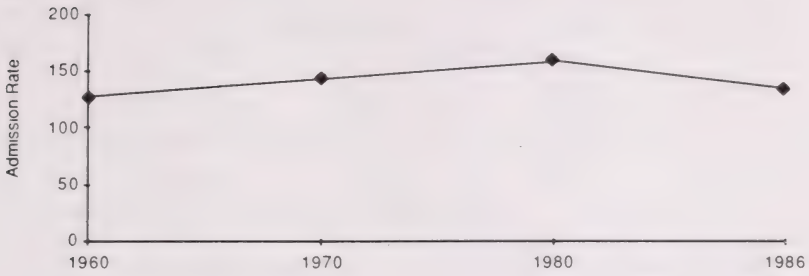

Figure 6.

since that time, the most recent year, 1986, representing a 15.3 percent decline from 1980.[20]

During the same period, length of hospital stay initially increased, then returned to the earlier rate, and most recently has decreased even further (See Fig. 7). Average length of stay was 7.6 days in 1957; it rose to 8.4 days in 1968. It then fell gradually to 7.6 days in 1977, where it remained until 1982.[21] In the last few years, spurred by the incentives in Medicare's Prospective Payment System, length of stay has fallen even further (See Fig. 8). For

YEAR	LENGTH OF STAY
1957	7.6
1968	8.4
1977	7.6
1982	7.6
1984	7.5
1986	7.1

*non-Federal short stay hospitals

Figure 7. Average length of hospital stay, 1957–1986.
Courtesy of American Hospital Association, *Hospital Statistics, 1957–1987* (Chicago, IL: American Hospital Association, 1987).

20. American Hospital Association, *Hospital Statistics*, 1987 ed., (Chicago, IL: American Hospital Association, 1987).

21. American Hospital Association, *Hospital Statistics*, 1957–1986 eds., (Chicago, IL: American Hospital Association, 1957–1986).

Year	Length of Stay
1976	11.0
1978	10.6
1980	10.4
1982	10.1
1984	8.9
1986**	8.8

*non-Federal short stay hospitals
**estimate based on January through August 1985 compared with January through August 1986.

Figure 8. Average length of stay of Medicare patients, 1976–1986.
Courtesy of Prospective Payment Assessment Commission, *Medicare Prospective Payment and the American Health Care System: Report to the Congress* (Washington, DC: Prospective Payment Assessment Commission, 1987).

Medicare patients, the average length of stay declined from 10.4 days in early 1981 to 8.8 days in fiscal year 1986, a stunning turnaround. Length of stay for the entire population had decreased to 7.1 days in 1986, a decrease of 7 percent in four years.[22]

Trends in hospital occupancy have paralleled changes in length of stay. Mean occupancy rates rose from 73.7 percent in 1957 to 78.8 percent in 1969. They hovered about 75 percent after 1975, but recently have declined.[23] Data from 1985 and 1986 show occupancy levels of 63.6 percent and 63.4 percent respectively.

In addition to these trends, there are a number of other important utilization patterns. As a nation, the United States performs very high rates of surgery. For example, the frequency of coronary artery bypass graft surgery in 1978 was much higher in the United States than in any other country (See Fig. 9).[24] Recent estimates are that the U.S. rate had increased to over 962 operations per million persons by 1985.[25]

22. American Hospital Association, *Hospital Statistics,* 1987 ed.
23. Ibid.
24. Kerry B. Kemp and H. David Banta, eds., *The Implications of Cost-Effectiveness Analysis of Medical Technology. Background Paper No. 4: The Management of Health Care Technology in Ten Countries,* Congress of the United States, Office of Technology Assessment (Washington, DC: U.S. Government Printing Office, 1980), pp. 119–140.
25. Stephen J. McPhee, Deborah W. Garnick, and Steven A. Schroeder, "Cardiac Imaging and Cost Containment: On a Collision Course," *American Journal of Cardiac Imaging,* 1987, *1*:204.

COUNTRY	FREQUENCY
FRANCE	19
WEST GERMANY	25*
SWEDEN	37
UNITED KINGDOM	74
NETHERLANDS[a]	78*
AUSTRALIA	150
IRELAND[a]	233
UNITED STATES	483* (1985 estimate=962)

*projected from earlier years' data.

[a]performed abroad.

Figure 9. Frequency of coronary artery bypass graft surgery (per million population) in selected countries, 1978.

Courtesy of Kerry B. Kemp and H. David Banta, eds., *The Implications of Cost-Effectiveness Analysis of Medical Technology. Background Paper No. 4: The Management of Health Care Technology in Ten Countries* (Washington, DC: Congress of the United States, Office of Technology Assessment, U.S. Government Printing Office, 1980), pp. 119–140; Stephen J. McPhee, Deborah W. Garnick, and Steven A. Schroeder, "Cardiac Imaging and Cost Containment: On a Collision Course," *American Journal of Cardiac Imaging*, 1987, 1:204.

Similar, although less dramatic, differences, are seen for other operations such as cataract extraction and prostatectomy (See Fig. 10). Given the American investment in surgical specialists and in the technology to perform surgery, it is likely that the United States will continue to be a country with very high rates of operations.

Another important pattern has been the shift of some elective operations from the inpatient to the outpatient setting. The most dramatic example of this shift is cataract extraction. About 90 percent of these operations are now performed outside the hospital, whereas only a few years ago, it was almost exclusively a hospital procedure.[26] Pressures for hospital cost containment have also resulted in elective surgery for such items as hernia repair, most eye

26. Prospective Payment Assessment Commission, *Medicare Prospective Payment and the American Health Care System: Report to the Congress* (Washington, DC: U.S. Government Printing Office, 1986).

COUNTRY	CATARACT EXTRACTION	PROSTATECTOMY
United States	206	308
United Kingdom	86	131
Canada	135	112
Australia	104	163

*Males only

Figure 10. Surgery rates for selected operations (per 100,000 population), 1980.

surgery, and minor gynecologic procedures being performed increasingly on an outpatient basis. In addition, many other medical processes that formerly occurred in the hospital, such as transfusions, elective endoscopy (visual inspection, often through fiber optics, of the interior of a body cavity such as an intestine, stomach, or bladder), cancer chemotherapy, and the treatment of medical illnesses such as pneumonia, are increasingly rendered in the outpatient setting.

For many conditions that still require hospital care, duration of stay has been sharply curtailed. Whereas post-partum women formerly stayed in hospitals five to seven days, they now commonly return home one or two days after vaginal delivery. As mentioned at the outset, patients with uncomplicated acute myocardial infarction are now discharged after as few as five hospital days, whereas two decades ago they might have remained for three weeks.

Thus, hospital technology and the search for efficiency are creating a bimodal pattern of hospital care. On the one hand, low-risk patients with routine medical or surgical problems are being discharged quickly, often after minimal observation. On the other hand, increasingly sophisticated medical care and technology permit the survival of seriously ill patients, but often at the cost of lengthy and expensive hospital stays. In effect, then, the relatively constant length of hospital stay during the past quarter century has been deceptive, masking an evolving pattern of relatively healthy short-staying patients and seriously ill patients requiring intensive hospital resources.

A dramatic example of this is the newborn infant. Most neonates are now discharged home after one or two hospital days, and

some infants are even born at home or leave the hospital within 24 hours of delivery. At the other pole is the premature infant, often suffering from respiratory distress syndrome and/or congenital heart disease. While survival for these precarious infants has improved dramatically, their care is very costly. For example, in 1982, mean charges for infants with respiratory distress syndrome of the newborn were $35,500 at the University of California, San Francisco Hospitals. For those infants with respiratory distress syndrome who required surgical ligation of a patent ductus arteriosus (the persistence of an open lumen in the arterial duct after birth, the direction of flow being from the aorta to the pulmonary artery, resulting in the recirculation of arterial blood through the lungs), a very common congenital abnormality in premature infants, the 1982 charges averaged $85,000.[27]

Trends in Medical Care Organization

Just as patterns of patient care are undergoing change, so are hospitals evolving organizationally. Among the important changes are the move toward for-profit and HMO hospitals, the increasing vertical integration of medical services, and the explosion of information technology.

The Changing Financial Status of Hospitals. For years the typical American hospital was a voluntary, not-for-profit independent organization, governed by a local board of trustees. Although in the minority, there existed a population of small proprietary hospitals, usually owned and managed by physicians. Today, the voluntary not-for-profit hospital is expected to remain the dominant model of hospital care in this country, but for-profit hospital chains and HMOs are becoming increasingly important.

The growth of for-profit hospital chains has been reviewed recently by a committee of the Institute of Medicine, National Academy of Sciences. To recapitulate briefly, in 1984 these chains owned 878 hospitals, accounting for 113,122 beds, or about 10 percent of U.S. hospital capacity. To date their growth has been concentrated in Sun Belt states such as Florida, Texas, Arizona, and California, and in the Southeast, but they are spreading throughout other parts of the country as well. Much of the early growth of these for-profit institutions came from the purchase of small, physician-owned,

27. Jonathan A. Showstack, Mary Hughes-Stone, and Steven A. Schroeder, "The Role of Changing Clinical Practice in the Rising Costs of Hospital Care," *New England Journal of Medicine*, 1985, *313*:1201–1207.

proprietary hospitals. More recently, however, for-profit hospital chains have both built new facilities and purchased hospitals that were previously in the not-for-profit sector.[28]

How fast the for-profit chains will continue to grow is unclear, as is their overall impact on the quality and cost of medical care. If hospital care is seen primarily as a profit-making activity, then hospital administrators must evaluate more carefully the profitability of individual hospital services and be less concerned about the extent to which those services fulfill a community's needs.

Perhaps even more impressive than the growth of for-profit hospitals has been the expansion of HMOs. HMOs can either own their own hospitals, as do most Kaiser Foundation Health Plans, or use hospitals in the voluntary sector, as, for example, the Harvard Community Health Plan uses the Brigham and Women's Hospital. In the latter case, the HMO will usually negotiate a discounted rate. HMOs may be composed of a closed panel of physicians, as in the case of Kaiser, or may involve many community physicians, as in the Independent Practice Association model. More recently, HMOs have even been operated by for-profit firms.

The current emphasis on price competition ensures that business and government will continue to create incentives for patients to enroll in HMOs as a means to control the costs of medical care. Since the principal savings realized by HMOs come from keeping people out of the hospital, major expansion of HMOs would seem to have at least two consequences. First, it would decrease the need for hospital beds, thereby exacerbating competition among hospitals for patients. Second, for those hospitals wholly or dominantly involved with HMO patients, there may be even greater pressure for early patient discharge.

Vertical Integration — The Hospital As Part of a System. There was a time when hospitals had to worry only about taking care of hospitalized patients. True, some hospitals also operated an emergency room, and perhaps even an outpatient clinic, but those activities required relatively little effort or investment. However, the changing financial status of hospitals, combined with the increasingly corporate structure of medicine and the need for hospitals to offer multiple services in order to preserve their share of the market, means that the hospital of the future will have to coordinate a wide

28. Bradford H. Gray, ed., *For-Profit Enterprise in Health Care* (Washington, DC: National Academy Press, 1986).

variety of clinical settings. These will include, in addition to the hospital proper, outpatient clinics, emergency rooms, outpatient surgery centers, diagnostic centers, long-term care facilities such as nursing homes and convalescent hospitals, hospices, and hotel accommodations. Hospitals without these services, particularly hospitals in competitive urban settings, will find it difficult to maintain a stream of referrals.

Forms of affiliation among these entities may vary, ranging from wholly owned subsidiaries to joint ventures or loose agreements.[29] If managing a hospital was difficult when a hospital was just a hospital, imagine the difficulty when hospitals become conglomerates. On the other hand, patient care may be improved because of the enhanced opportunity to coordinate services before admission and after discharge.

The need to care for an older group of patients who will be discharged more quickly challenges hospitals in an area where they have been most vulnerable — the provision and coordination of care for patients with chronic diseases.[30] There are at least three reasons why this is so. First, the model that has emerged for the modern American hospital has been acute care, as exemplified by surgery and by David Rothman's vision of the "shiny intensive care unit," described elsewhere in this issue. This model has traditionally avoided concerns more crucial to chronic illness, such as rehabilitation, convalescence, and patient education. Second, physician training has historically been hospital-based, and conceptually modeled on acute care.[31] Third, payment for physicians' services favors interventionist, acute-care services over those services required for chronic illness and rehabilitation.[32] It is clear that at present acute care hospitals are not well positioned to respond to the challenge of chronic illness.

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29. For a full discussion of hospital economic diversification, consolidation, and organization, see the article, "The Future of the Hospital: An Economist's Perspective," by Frank A. Sloan, elsewhere in this issue.

30. Anselm Straus, *Chronic Illness and the Quality of Life* (St. Louis, MO: Mosby, 1975).

31. Steven A. Schroeder, Jonathan A. Showstack, and Barbara E. Gerbert, "Residency Training in Internal Medicine: Time for a Change?" *Annals of Internal Medicine,* 1986, *104*:554–561.

32. Jonathan A. Showstack, Mary Hughes-Stone, and Steven A. Schroeder, "The Role of Changing Clinical Practices in the Rising Costs of Hospital Care," *New England Journal of Medicine,* 1985, *313*:1201–1207; Steven A. Schroeder, "Doctors and the Medical Cost Crisis: Culprits, Victims, or Solution?" *The Pharos,* 1985, *48*:12–18.

The Medical Information Revolution. While vertical integration will stretch the hospital beyond its former boundaries, within the hospital itself there will be an explosion of technology relating to the processing and dissemination of medical information. Advanced hospital information systems are already in place at some institutions and offer a preview of what may be expected at many hospitals in the near future.

For example, an integrated, hospital-wide clinical computing system has been in operation at one hospital in Boston for nearly a decade. This system permits physicians, nurses, medical students, and other health workers to have access to a wide set of clinical information, including data from the clinical laboratory, reports from the departments of radiology and pathology, patient demographic data, information about visits to outpatient clinics and the emergency room, and prescriptions filled in the outpatient pharmacy. In addition, the system can be used to perform bibliographic retrieval of items in the National Library of Medicine's MEDLINE data base; to compose, edit, and respond to electronic mail; and to request delivery of medical records. With the use of three hundred video display terminals scattered throughout the hospital, the system has apparently achieved wide acceptance as a convenient, efficient, and reliable means of communication that can also ensure confidentiality.[33] It is very likely that this sort of system will soon exist in most large hospitals. In addition to using computerized medical information systems for the transmission of clinical, financial, and demographic data, physicians in the future may be able to draw on large clinical data banks in the medical literature to assist in clinical decision making or to monitor the impact of trends in physiologic function. As software programs for medical usage are developed to take advantage of the explosion in medical computing capability, it may be that many other uses will become apparent.

Emerging Medical Technologies

In order to understand the hospital of the future, we have reviewed trends in the supply of medical personnel and equipment, demographic changes, the demand for medical care, patterns of hospital

33. H. L. Bleich, R. F. Beckley, G. L. Horowitz, J. D. Jackson, E. S. Moody, C. Franklin, S. R. Goodman, M. W. McKay, R. A. Pope, T. Walden, S. M. Bloom, and W. V. Slack, "Clinical Computing in a Teaching Hospital," *New England Journal of Medicine*, 1985, *312*:756–764.

utilization, and medical care organization. It now remains to speculate on what new developments in medical technology will occur, and how these developments will affect medical practice.

Perhaps the most comprehensive review of emerging medical technologies was conducted by the U.S. Congress's Office of Technology Assessment (OTA) in late 1984. For its review, the OTA surveyed a number of experts in an attempt to identify "significant technologies that will probably appear on the health care scene in the next 5 to 15 years." These responses, which were compiled in a July 1985 memorandum, provide a useful forecast of important new technologies, and, by inference, an indication of how the use of those technologies could alter hospital care.[34] The responses can be grouped in the following broad categories:

Artificial and transplanted organs and tissues and prosthetic devices
Biotechnology-related developments
Medical imaging and other diagnostic technology
Mental health
Biologics and pharmaceuticals
Reproduction, fetal, and child health
Surgical advances
Laser technology

Partial excerpts from the responses are summarized below, as are my own estimates of the impact of these technologies on hospital care.

Artificial and Transplanted Organs and Tissues and Prosthetic Devices

Transplants. Advances in immunosuppression (the artificial prevention of the immune response) should improve the results of current organ transplants and make possible others that are not currently being performed. Cloning and tissue culture techniques may expand potential sources of transplant material. Efficiency of transplantation will be enhanced by a newly implemented national computerized registry of potential recipients and donors.

Artificial Organs and Tissues. Dramatic improvements are expected in the assisted function of failing human organ systems. In addition, continued improvements are expected in material for devices, in power systems for artificial organs, and in assistance devices for communication disorders.

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34. Office of Technology Assessment, *1984/85 Survey on Future Health Technology Assessment* (Washington, DC: U.S. Government Printing Office, July 1985).

Prosthetics. Advances in prosthetics will result from improved materials, control of foreign body reaction, enhanced computer control and miniaturization, and better bioengineering capability. Specific improvements may result from implantable sensory aids, such as the artificial cochlea and sensors for vision and smell; myoelectric prostheses to substitute for missing limbs; and devices to control incontinence.

The new technologies in this category can be expected to affect hospital care in several ways. First, they may shorten length of stay by making the process of transplantation easier. Second, by expanding the pool of people eligible for transplants and prosthetic devices, they should create additional demand for hospital services. Finally, some of the technologies will require a new kind of hospital input. For example, the artificial cochlea will require extensive training and rehabilitation in order for the patient to have even partial restoration of hearing. Similar educational and rehabilitative efforts will be necessary for other sensory aids, prosthetic limbs, devices for incontinence, and the like. Maximal functional results will probably require continued rehabilitative efforts after the patient leaves the hospital.

Biotechnology-Related Developments

Monoclonal antibodies and hybridization probes are examples of highly specific identifiers of antigens (a substance such as toxin, foreign protein, or bacteria capable of inducing the formation of antibodies and then reacting in a specific way with the antibodies produced), and genes, that have great promise as diagnostic and therapeutic agents. Sample applications include specific nontoxic chemotherapy; *in vitro* immunoassay; diagnosis, therapy, and screening of various genetic disorders; diagnostic testing in the home; purified and highly selective vaccines; and many others.

For the most part, biotechnology-related innovations appear to fall into that "happy" class of technologies that should improve both the quality and the efficiency of care. I do not foresee their having a major impact on the actual process of hospital care, although they will certainly require modification (and expansion) of clinical laboratory capabilities.

Medical Imaging and Other Diagnostic Technologies

Aided by improvements in computers and radioisotope labeling and by refinements in sonography, medical imaging will continue to

expand rapidly. Improvements will come in speed, safety, resolution, and interventional techniques. Numerous advances in non-radiologic diagnostic techniques were predicted in the OTA studies. Among these were non-invasive monitoring of physiologic functions, blood gases, and certain blood chemistry tests; flow cytometric techniques to detect circulating tumor cells, assess immunity, and detect genetic abnormalities *in utero*; and non-invasive cardiology testing.

This category of advancement raises two generic issues in hospital care: cost-benefit analysis and the substitution of one type of service for another. Each of the recent major advances in diagnostic radiology — computerized tomography, ultrasound, and magnetic resonance imaging — has brought about major increases in diagnostic precision, but at sharply increased costs. It is unclear whether further improvements in diagnostic accuracy will bring sufficient benefits in patient health status to merit what will probably be significantly increased costs. Under the old system of hospital reimbursement, all that was required to adopt new technology was assurance of its safety and clinical utility. With the move to fixed-payment per case, however, diagnostic technologies will now be scrutinized in order to see whether their benefits are worth the costs.

The issue of substitution derives from the possibility that certain radiologic developments may be able to replace more invasive techniques. For example, interventional radiologic techniques may supplant surgery in selected cases. This has already occurred to some degree in the treatment of gallstones, kidney stones, and abdominal abscesses. As the field of radiology expands, especially into therapeutic areas, hospitals will shift resources from surgical to radiologic facilities.

Computer and Information Technologies

Advances in this field derive from the broadening health applications of computers, the expansion of information and data bank networks, and the impressive improvements in computer power, storage capacity, and sophistication. Specific applications of computer technology include assistance in all aspects of medical care, including diagnosis, treatment, and other aspects of clinical decision making; increased applications of computer-assisted medical imaging; more sensitive and comprehensive monitoring of patients in various settings, including home, office, and critical care units — with enhanced opportunity for remote site consultation; and expan-

sion and development of data bases to assist in clinical work, risk factor identification, and patient education.

How the inevitable growth of computerized systems within hospitals will affect patient care is unclear. The increased ease of communication could personalize care, reduce staffing needs, and enhance quality. On the other hand, interposition of centralized processes could also create barriers between health workers and patients. In any event, it seems clear that a new category of hospital worker — the computer expert — will continue to grow.

Mental Health, Behavior, and Psychiatry

Developments in this field were predicted in both pharmacologic agents and strategies for behavioral modification. Unless behavior modification techniques become an important mainstay of hospital care, developments in this category should be assimilated easily into hospital routines. Since techniques for behavior modification require different skills, and — in the case of such examples as biofeedback, different apparatus — their widespread application might require a different category of health care worker and the need for different rooms and equipment.

Biologics and Pharmaceuticals

It is expected that new vaccines will be safer, more effective, and efficacious against a wide variety of diseases. Meanwhile, pharmaceutical advances will expand the efficacy of drug treatment. For example, implantable infusion pumps and controlled drug delivery systems will deliver localized, specific therapy for cancer chemotherapy, infections, and inflammation.

To the extent that new vaccines can prevent catastrophic illnesses such as AIDS, in the way that polio has been virtually eradicated, then those potential patients will never require hospital care. The more morbidity and premature deaths prevented, the more hospitals will focus their care on elderly patients with degenerative and terminal illnesses. The advances in specific pharmaceuticals and in drug delivery systems will further increase the need for patient education, home monitoring, and coordination between hospital and outpatient care. Nurses will be the key personnel for most of these functions.

Reproduction, Fetal, and Child Health

Advances in treatment of infertility will permit couples who were

previously infertile to become "biologic parents." Wider applications of such techniques as artificial insemination, *in vitro* fertilization, surrogate motherhood, and preservation and storage of embryos will increase the complexity and vigilance of prenatal care, as well as focus more attention on the actual delivery process. Parallel developments will occur in prenatal diagnosis and treatment. In utero treatment (aimed at the fetus inside the uterus) of genetic disorders will feature drugs, gene therapy, and surgery. The advances in conception technology and in prenatal treatment will intensify the process of prenatal and peripartum surveillance.

"Normal" conception and vaginal delivery may become less common as couples delay the onset of parenthood and then seek assurances that their child will not be "damaged." Malpractice premiums for obstetricians will continue to climb as congenital abnormalities and traumas of the birth process are viewed more as resulting from ineffective use of technology than as inevitable risks of pregnancy. As conception, fetal development, and birth become increasingly monitored, reproductive services may become limited to regional centers in urban settings, with family practitioners and smaller hospitals abandoning this field because of malpractice pressures, low anticipated volume, and consumer preferences.

Urban hospitals will feature centers for reproductive health that provide an entire spectrum of technologies for conception, prenatal diagnosis and treatment, as well as the delivery of high-risk infants. These hospitals will be under pressure from their patients to make the technology as "humane" and "natural" as possible, while yet incorporating every possible technological advance. This tension is just one more example of the dilemma of how optimally to blend personal care and medical technology.

Advances in Surgery

Surgical advances will occur across a broad front of activities. Invasive and non-invasive monitoring of physiologic functions will permit tight anesthesiology control and provide early warning of potential problems. Improvements in microsurgery, laser technology, and intraoperative radiation will expand the possibilities for reconstructive surgery, cancer surgery, and wound healing.

The impressive decline in surgical mortality in the past decade, brought about by improvements in intra- and postoperative care, has expanded greatly the types of patients and clinical problems eligible for surgical procedures. Further decreases in surgical risks

can be expected, leading to even broader indications for the performance of surgery. As surgical techniques and convalescence improve, more and more routine operations will be shifted to outpatient settings. At this point it is unclear whether more or fewer operations will occur in hospitals. The answer will depend on the impact of conflicting trends — on the one hand, improved techniques that expand those eligible for procedures, and on the other, the shift to outpatient surgery and the substitution of other modalities (such as lasers, interventional radiology, and selective chemotherapy) for surgical procedures.

Laser Technology

Significant expansion is predicted for laser applications in health care. Lasers will be used increasingly as surgical instruments, for medical uses such as photocoagulation (the use of laser beams to stop bleeding) and antitumor activity, and in many other ways. It is likely that lasers will soon be used widely to dissolve atheromatous plaques (fatty deposits) in coronary, carotid, and peripheral vascular arteries. They are already beginning to be used to open obstructed orifices, such as far-advanced esophageal cancer or tracheal stenosis, to stop visceral hemorrhage, and for dermatologic surgery.

Laser therapy is truly one of the most exciting new technologies, and its range of potential applications has just begun to be explored. It is quite likely that laser therapy will result in totally new therapeutic applications. It is also likely that it will substitute for some existing treatments, such as coronary angioplasty (catheter-mediated treatment of blood vessel disease), emergency surgery, and non-pharmacologic treatment of bleeding lesions.

This review, although by no means exhaustive, provides a brief preview of important emerging medical technologies and how they might affect hospital practice. Their ultimate role, of course, will depend upon the actual development and effective deployment of the technologies themselves, and ultimately upon the social, economic, and organizational trends already described.

Summing Up And Sorting Out Conflicting Trends

The trends summarized thus far indicate the presence of two conflicting sets of forces affecting hospital care, one favoring expansion and intensification of care, and the other promoting restraint. The expansive forces are powerful, and include demography, the existing

and projected supply of medical personnel and equipment, the strong desire of American consumers for state-of-the-art medical care, concerns about defensive medicine, and the seemingly inexorable flow of new diagnostic and therapeutic technologies. In the past, these forces have been sufficient to expand the number and costs of hospital services at a rate about double the American economy as a whole. Only recently have restraining forces appeared that seem capable of slowing this expansion. These restraining forces, which are almost entirely economic, have already brought about considerable changes in hospital care, and many analysts predict that even more substantial changes will follow. To a large extent, the shape of the hospital of the future will depend upon the relative strengths of these two opposing sets of forces. Our predictions about the future of the American health care system necessarily take this tension into consideration.

The Differentiation of Hospitals

At least two scenarios can be envisioned for hospitals as systems. The first scenario calls for the increasing evolution of two fundamental hospital types. The first type, as exemplified by university teaching hospitals and certain other tertiary referral centers, represents a logical progression from the current status. In this scenario, care in these hospitals would intensify even further, with the majority of beds devoted to intensive care capability. Overall bed capacity would decrease, and, as part of a vertically integrated system, these hospitals would participate in a wide set of ambulatory care and extended care activities.

The second type of hospital would represent an evolution from the current status of many community hospitals. These centers would feature low intensity care, concentrating on elective surgery and uncomplicated medical illnesses, possibly including long-term and/or hospice care. Emergency and intensive care services would receive less emphasis. The success of this variant would require hospital payment systems that favor care of uncomplicated patients, plus the existence of county or municipal hospitals to provide emergency and indigent care.

An alternative scenario hypothesizes that all hospitals will respond to current forces in similar ways. They would all evolve into higher intensity, often smaller, institutions. Existing differences in intensity might be preserved, but all would move toward more intensive care. Excess capacity would be reduced by closure of

some hospitals and by consolidation and shrinkage of many existing facilities.

The first scenario would feature more regionalized care and discrete referral networks, whereas the alternative more resembles the present system of hospital care, but with reduced capacity and increased intensity. The most important determinants of the scenario to be enacted are the specific details of hospital payment systems and the extent to which entrepreneurial hospital systems continue to grow.

Changes Within Hospital Walls

A number of related changes in the ways that all hospitals operate appear likely. Although, as now, differences among hospitals may remain substantial, the following general tendencies seem probable.

Increased Focus on the Business Aspects of Hospitals. Hospitals appear to be very responsive to the monetarization of medical care.[35] As payment moves from charge- or cost-based formulae to fixed (and often competitive) prices per case or per day, hospitals are forced to adopt fiscal management procedures and strategies like any other business. The erosion of sources of cross-subsidies for such non- or under-remunerated activities as indigent care and medical education jeopardizes the status of these activities; unless new payment sources are found, it is unlikely that hospitals will wish to initiate or continue such programs.

Many semantic and symbolic changes, some subtle and some more obvious, reveal how hospitals are becoming more like other businesses. Increasingly, hospital administrators have been trained in business schools or corporate settings, rather than in schools of hospital management. Even within hospital administrative programs, a business-oriented curriculum is replacing the traditional subjects of medical service. Marketing experts and plans are becoming more prominent in hospital budgets; the agendas of board and staff meetings more often feature items such as joint ventures, entrepreneurial activities, market strategies, and affiliation opportunities; and the television airways increasingly are filled with advertisements extolling the competence and humanism of local hospitals and health care plans. Sound fiscal management will require that hard questions be asked about staffing patterns, since employee salaries

35. E. Ginzberg, "The Monetarization of Medical Care," *New England Journal of Medicine,* 1984, *310*:1162–1165.

are the overwhelming variable expense of every hospital. Nurses and other service employees will increasingly be hired on flexible staffing patterns that can respond to daily changes in patient flow. This will create strains in working patterns, since irregular work schedules make it more difficult to develop coordinated teams for patient care. How to maintain staff morale and loyalty will be even more of an administrative challenge than it already is; one result may be further unionization of health workers.

Decentralized management is a likely strategy for administration of the various clinical units within the hospital. It is likely that designated nurses will coordinate services within each discrete unit. It is also likely that hospitals will scrutinize more carefully the need for such clinical employees as respiratory therapists, dieticians, social workers, and so forth. Many knowledgeable hospital experts predict the numbers of such personnel will be reduced in the name of hospital efficiency and that their duties will be assumed by staff nurses.[36]

Patterns of medical practice will also come under increased scrutiny. Computerized profiles of service utilization will be available by diagnosis, clinical specialty, and individual clinician. Utilization review procedures will examine aberrant patterns, especially those that are on the high side, and strategies will be employed to reduce utilization, especially of costly services.

It remains to be seen what effect the commercialization of hospital care will have on the quality of patient care. Critics of the "market strategy" predict that hospitals will compete for patient care with gimmicky "boutique" services, such as champagne breakfasts and gourmet meals, while skimping on more essential but less glamorous clinical services. They also fear that those most in need of intensive services — the old, the frail, the poor — will be the first to suffer.

A contrasting view holds that competition will be salutary for patient care, and that by giving consumers the choice of differing levels of services at different prices, a felicitous blend of increased quality and decreased costs will emerge. Such an outcome seems more likely for well-educated and well-insured consumers than for

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36. Aiken and Mullinex, "The Nurse Shortage."

the 37 million people without health insurance and the 22 million Medicaid recipients.[37]

Changes in the Process of Medical Care. Competition will not only grow between hospitals, but it will also intensify within the walls of the hospitals themselves. Interspecialty turf battles over control of new technologies will pit surgical specialists, radiologists, anesthesiologists, and medical subspecialists against each other for space, equipment, services, and, most importantly, patients. Examples of these skirmishes are the use of diagnostic ultrasound, where cardiologists control the technology when it is used for imaging the heart, but radiologists use it elsewhere in the body; angioplasty, where vascular surgeons, radiologists, and cardiologists vie for jurisdiction; and endoscopy, where gastroenterologists and general surgeons compete. Although there is nothing new about competition among physicians, these stresses are likely to be exacerbated in an era of contained growth.

Some foresee competition also occurring between physicians and nurses. As physician oversupply impedes the ability to secure employment, especially in desired metropolitan locations, hospitals may be able to hire young physicians at salaries comparable to those earned by nurse specialists. If the income gap continues to narrow between salaried, non-technology-intensive physicians and nurses, then nurse specialist and nurse practitioner positions could become endangered. Nurse-physician tensions could also be exacerbated by the increased role of nurses in Professional Review Organizations (PROs), which use nurses to screen for instances of poor physician care.

Another set of changes relates to the increased fragility of most of the patients who will be in the hospital of the future. As described earlier, many of these patients will be elderly, afflicted with severe impairment of many organ systems, and dependent on assistance with nutrition, respiration, renal function, cardiac output, or circulation. In such patients, the margin of error for clinical decisions is precariously small, the prognosis is often grim, yet technology will be available to assist failing organs and sustain life almost indefinitely. How far to go in these situations will be a dilemma increasingly faced by clinicians.

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37. Library of Congress, Congressional Research Services, *Cash and Noncash Benefits for Persons with Limited Income: Eligibility Rules, Recipient, and Expenditure Data, Fiscal Years 1983–1985,* Report No. 86-161 EPW (Washington, DC: Government Printing Office, September 1986).

To the extent that computerized data on prognosis are available, they may be helpful in formulating treatment plans. Unfortunately, such data may not be sufficiently definitive to warrant either abandoning hope or proceeding with wild optimism. As a result, issues of quality of life, cost-benefit ratios, the wishes of patients and their families, and the principles of ethics and the law will have an increasing impact on clinical judgment. To the extent that a hospital's intensive care capability is constrained for economic reasons, then the ethics and economics of care of the desperately ill patient with a poor prognosis will be a more important feature of hospital practice. This is not to suggest that this is inappropriate, but rather to point out a shift in emphasis of care. The two professional groups who will be most affected by this shift will be nurses and doctors.

The Evolving Role of the Nurse

Nursing care has always been the essential glue that holds together the clinical aspects of hospital care. There is every indication that, as hospitalized patients become even sicker, nursing care will become more important. As in the present, nurses in the future will assume at least five clinical roles: (1) They will continue to monitor patients according to instructions from physicians and their own clinical judgment; (2) by virtue of the monitoring process, they will often be the first to detect changes in clinical conditions, to arrive at presumptive diagnoses, and to suggest changes in therapy (this function will be particularly vital in those many hospitals where physicians spend relatively little time); (3) they will continue to provide or supervise the basic caring functions, which often do so much to enhance patient comfort; (4) they may often serve as the patient's advocate in helping to formulate management plans; and (5) they will play an increasingly important educational role regarding post-discharge care.

It is obvious that nurses will need to work closely with physicians in order to function optimally in these five roles. Because nurses are, as a rule, better educated and better paid today than previously, the nursing profession should be in a strong position to relate to physicians. Of course, issues of role boundaries, delegation of authority, and conflict resolution could remain contentious. There is a division of opinion as to whether more hospital nurses will become clinical specialists, concentrating on a particular organ system or demographic group, or whether more will remain as

general nurses. The answer will depend on how the need for specialized nursing services compares with the hospital's need for flexible staffing patterns.

As hospital length of stay declines and seriously ill patients with multiple chronic illnesses are discharged even earlier to home or to an extended care facility, recovery will be even more dependent on effective coordination between hospital care and post-discharge care. How successfully this can be accomplished will depend to a very large extent on the success of nurses as patient educators and coordinators of care as well as on the effective assistance of social workers. To the extent that quality of care can be preserved while hospital costs decrease, then nurses as a profession will deserve a major portion of the credit. To ensure that such outcomes can occur, hospital administrators and physicians must provide hospital nurses with the appropriate resources and authority.

It may be argued at this point that too much is being expected of the nurse. In an era of increasing depersonalization of care, symbolized by the intensive care unit and the incessantly sounding beeper, even the most caring nurse may be overmatched. Further, it is questionable whether recent gains in nursing salaries can be sustained in a time of hospital price competition. If hospitals are unable to provide well-motivated and compassionate nursing care, then the prospects for humanistic care in the hospital of the future are grim. Indeed, there is now concern that limits on nursing salaries, in combination with the increased demands on hospital nursing functions, may be creating a shortage of hospital nurses.[38]

The Physician: Still Captain of the Ship?

Many of the trends discussed in this article contain a common theme — the erosion of physician autonomy. The pressures for hospital cost containment, the increasingly corporate nature of medical practice, the move toward protocol medicine and clinical decision making via automated data bases, the need for ethics committees to help adjudicate how scarce resources such as intensive care beds can be allocated among multiple claimants with discouraging prognoses, the continued threat of malpractice suits, the surveillance and possible punitive actions of hospital utilization review committees, and the move toward more active patient participation in clinical decisions all represent potential threats to the old status

38. Aiken and Mullinex, "The Nurse Shortage."

of the independent practitioner who made decisions according to the best clinical judgment. Physicians will now practice under the collective scrutiny of hospital committees and will be accountable for their financial as well as clinical decisions.

Nevertheless, it is still likely that the physician will remain "captain of the ship," although probably with a less adoring and more watchful crew, a shorter contract, and a smaller vessel. Despite concerns about corporate medicine, cost containment, and dehumanizing technology, it seems neither feasible nor desirable to construct a medical care system without someone in charge, and that someone cannot be anyone else but the physician.

Conclusion

Despite the many technological changes that are predicted for medical care, the future of medical practice in the hospital will be determined more by the values and priorities that our society embraces, than by the technologies it employs. The degree of universal entitlement for medical care, the extent to which hospitals are pressed to reduce the costs of care, the attitudes toward care of the terminally ill, and the circumstances surrounding medical malpractice will all have profound impact on the future of the hospital. To the extent that many of these issues will be resolved in the social and political arenas, then our hospitals will continue to reflect the national characters and priorities of the nation. Given this country's abundant investment in medical services, its historic demand for those services, and its continued prosperity, even in the face of mounting budget deficits, it would appear that the pattern of increasing clinical intensity (as defined by inputs received per day in the hospital) will persist despite cost containment pressures.

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The Hospital as a Social System: New Roles and Relationships

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Introduction

Actions have consequences. However, not all consequences are intended, or beneficial, or even foreseen. In the complexity that is the modern American hospital, both external events and internal developments encourage the emergence of new roles and relationships and the evolution of those that already exist.

Hospitals differ from one another, both individually and by category — be they teaching hospitals, suburban community, rural, or government; investor-owned, independent, or part of a larger chain or alliance. Examination of recent developments within hospitals and the events that helped bring about these developments may help foretell the nature of these institutions tomorrow. This article examines changing aspects of the behavior of people in the modern hospital and some of the forces that influence the hospital, its social systems, and the individuals within those systems.

To begin, let us consider the very concept of the hospital. The modern hospital is essentially an institution of *nurture* which provides the base for *medical intervention*. Today, neither process could be accomplished without professional nursing. Indeed, understanding the centrality of nursing is an important key to understanding the hospital itself: a place of 24-hour, highly professionalized nursing care in which periodic perturbations — well motivated and often, but not necessarily always, for good — are generated by physicians.

In its origins, as Professors Charles Rosenberg and David Rothman discuss in their respective articles, the hospital's work was primarily social: harboring those shunned by society. The eventual move by hospitals to a nurturing role was impelled largely by outsiders. Nurses had been deemed of low status until Florence Nightingale began the professionalization of that calling with the establishment of the first school of nursing at St. Thomas's Hospital, in London, in 1860. Interestingly, medical staff were opposed to this educational endeavor, yet the grudging acceptance of the move-

Transactions & Studies of the College of Physicians of Philadelphia Ser. 5, Vol. 12, No. 2 (1990): 207-225
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ment to upgrade and professionalize nursing may well have set the precedent emulated several decades later, when growth in the stature of the physician paralleled the burgeoning of scientific medicine. Similarly, today, growth in the stature of managers relates to the hospital's enlarging requirement for informed, sophisticated, professional administrative management.

With the discoveries of asepsis and anesthesia and the growth of bacteriological and physiological knowledge in the nineteenth century, the public stature of physicians began to rise, particularly that of the surgeon, who was most readily seen as able to intervene favorably. In recent decades, status within the hospital has also come to depend on the capacity of the surgeon or physician to generate revenue, that is, to keep the hospital busy both through surgery and other procedures performed and through the volume of patients admitted. Today, as both institutions and those who pay for care struggle for ways to measure quality of care, its costs and effectiveness, the status of the physician relates additionally to others' judgments on the nature of his or her decision making and the care that results. Tomorrow, standards by which performance is measured may include aspects of the doctor's pathway in decision formation, as well as quality of outcome and cost. Ultimately, of course, patient satisfaction will have its influence, but its registration may be less forceful in the short term, with third-party payers' view of health care biased more toward seeing it as an economic commodity than as a human service.

External Influences on Internal Relationships: Economics

For nearly a century after Florence Nightingale, the hospital evolved at a moderate pace and in a relatively straightforward fashion, but over the last several decades a new emphasis has arisen: economic considerations have become increasingly dominant. With escalating costs provoking limitations on payments, the use of the hospital is becoming restricted to care that can be delivered *only* in the hospital environment. Increasingly, that care is restricted to its most essential and intensive components, with the remainder of the specific health care episode played out in the home or in institutions of lesser cost and intensity than the acute care hospital. Increasingly, too, the agencies paying for that care are intolerant of existing cross-subsidies for care of the poor and for medical education.

Underlying these changes is a redistribution of the power to make decisions on the allocation of hospital resources. Until recently, physicians dominated the hospital power structure, and sociologists wrote of the dual lines of authority — medical and administrative — in the hospital. Harvey Smith cited the distinction made by Max Weber of "bureaucratic authority," or what was on the organization chart, versus "charismatic authority," or the compelling power of the physician.[1] Smith wrote in 1958, "There is almost no administrative routine established in hospitals which cannot be (and frequently is) abrogated or countermanded by a physician claiming medical emergency."[2] Rodney Coe argued that the basis of this power lay in the fact that the physician "held a virtual monopoly on medical knowledge which the hospital wanted to apply to its patients."[3] In many institutions, there was a governing triad — trustee, doctor, and administrator — yet the physician was supreme, not simply because he knew clinical medicine and the others did not but also because of economic power. The physician distributed patients to hospitals, deciding both who needed hospital care and to which institution the patient would go. As a result, the physician controlled the lifeblood of the hospital: its revenue.

Over the past two decades, however, much of the economic power once vested in physicians has moved to Medicare and Medicaid, to business employers, and to the insurance enterprises that pay for care today; these agencies have become both the allocators and the rationers of hospital revenue. Federal and state governments meanwhile came to recognize, from rising Medicare and Medicaid budgets, that the intrinsically inflationary cost reimbursement and fee-for-service systems could not go on forever. And with the recession of the early 1980s, American business, scrutinizing its dwindling bottom line, realized that health care payments had become large enough to be given the same diligent attention as other cost inputs of their products. Indeed, once it examined its health care costs, American business discovered that it purchased enough health care to have real buying power. And when the present and projected surfeits of hospital beds and physicians became apparent, business and government consolidated their hold on what had become a buyers' market. Comparing data from health maintenance organi-

1. Harvey L. Smith, "Two Lines of Authority: The Hospital's Dilemma," in E. G. Jaco, ed., *Patients, Physicians and Illness* (Glenco, IL: The Free Press, 1958).
2. Ibid.
3. Rodney M. Coe, *Sociology of Medicine* (New York: McGraw-Hill, 1970).

Year	Census Region								
	New England	Middle Atlantic	South Atlantic	E. North Central	E. South Central	W. North Central	W. South Central	Mountain	Pacific
1976	8.1	9.2	7.4	8.1	7.2	8.1	6.6	6.5	6.4
1978	8.1	9.1	7.4	7.9	7.0	8.1	6.5	6.5	6.4
1980	8.2	9.0	7.4	7.9	6.9	8.0	6.5	6.6	6.5
1982	8.3	9.0	7.5	8.0	7.0	8.4	6.5	6.6	6.4
1984	8.0	8.8	7.1	7.5	6.8	8.0	6.3	6.4	6.2
1986	7.5	8.2	6.9	7.1	6.8	8.2	6.2	6.3	6.1

Figure 1. Hospital lengths of stay by United States census region, 1976–1986.

Courtesy of American Hospital Association, annual surveys.

zations (HMOs) with that from conventional fee-for-service practice and from studies such as those of John Wennberg and Alan Gittelsohn, a pattern appeared of dramatically different rates of elective surgery in comparable communities; this finding lent support to the suspicions of government and business that the doctor does not always know best and justified the third-party payer's increase in control over medical practice.[4]

The nationwide decline in length of stay in recent years illustrates the force of the third-party payers' economic power (See Fig. 1). True, the significant regional variation in hospital length of stay — as much as 1.5 days less for comparable patients in the western United States versus those in the eastern states — prompted physicians to re-examine some of their long-held assumptions about "proper" duration of stay, but hospitalization has become abbreviated across the country. The impulse for these reduced lengths of stay was economic, and it was triggered by the third-party payer. Whether more of these external pressures will oblige doctors and hospitals ultimately to go beyond their own best clinical judgments, in terms of either length of stay or criteria for admission or discharge, remains to be seen. It is doubtful that physicians will be coopted to the serious detriment of their patients, but already there is evidence of inconvenience and occasional distress among Medicare

4. John Wennberg and Alan Gittelsohn, "Small Area Variations in Health Care Delivery," *Science,* 1973, *182*:1102–1108; John Wennberg and Alan Gittelsohn, "Variations in Medical Care among Small Areas," *Scientific American,* 1982, *246*:120–134.

patients whisked in and out of the hospital under the stimulus of rules concerned more with money than with care.

Fallout from the Shift of Power: How Economics Affects Authority and Care

The shift of power from the physician to the third-party payer not only has led to changes in the nature of the care rendered but also threatens to diminish ready access to care for the poor. Once deemed a social good, health care now threatens to become a market commodity with a return to two classes of care — one for the "haves" and another for the "have nots" — the very situation Medicare, Medicaid, and broadly applied health insurance for the working family were designed to eliminate. If the mission of the hospital, the provision of care, is a public good, then those who empower it should be subject to appropriate public accountability. In the past, society relied on the professionalism and choices of the physician as sufficient to guide his or her exercise of power in the allocation of the resources of care. Now the balance of power has shifted. Business and government with their multiple priorities have more control over the allocation of resources. In turn, accountability to the public has diminished. The burning question for society is, will health care suffer as a result?

How is economics reshaping the character of the hospital? Today, when a patient is admitted, the projected length of stay for his or her diagnosis is entered into a system for "quality control" or "utilization review," and subsequent aspects of the hospitalization are monitored. The benefits of such scrutiny can include more efficient scheduling of complex tests and the more timely processing of applications for anticipated nursing home placement or other post-discharge care. More problematic, however, are the pressures of an assigned average length of stay and the heightened pace of care, particularly on the opportunities to reassure and to educate the patient. It has become increasingly likely that hospital discharge takes place prematurely. Often the patient is not ready to return home, at least in terms of the patient's and his or her family's understanding of the disease and how to cope with it. Not uncommonly the patient leaves the hospital before the physician has a good feeling for how well, overall, the patient can and will be able to manage.

Most evident in the teaching hospital, but apparent in all institutions, a shortened length of stay results in an overall increase in the average intensity of illness of the patients in the hospital, creating additional demands on medical, nursing, and other staff that are not readily reflected in conventional patient-day statistics.[5] For example, many patients today come to surgery on the same day of their admission, arriving at the hospital early in the morning and moving from a staging area directly into the operating suite. After surgery, the patient goes to the recovery room and, once the effects of anesthesia have sufficiently worn off, is moved to a nursing care unit for the remainder of the hospital stay. Time is thereby limited for the anesthesia service to get to know the patient in advance of surgery and for the patient to be reassured about the experience he or she is facing. A problem also exists for nursing: the patient may spend several days recovering from surgery on a unit where both personnel and facilities are completely unfamiliar at the point of transfer from the recovery room. Consequently, it is more of a struggle for staff to achieve that sort of personalization that optimizes both individual reassurance and straightforward care. Such foreshortening of stay creates a similar hurdle for the intern or resident; indeed, for all staff who provide care during hospitalization.

In the teaching hospital, these pressures also create barriers to student learning. The medical student is placed on a patient unit in order to gain familiarity with the natural history of illness, but to the extent that hospital stay is truncated, the quality of that learning experience is undermined. Not long ago, a medical student would have had the opportunity to take his or her own history and perform a physical examination on an incoming patient. Tentative conclusions would be reached, which might then be shared later the same day with the senior physician and the interns and residents. The evening might include studying about the patient's disease, the nature of the surgery planned, the course to expect, and possible problems to anticipate. The student might scrub (that is, take part) at surgery the following day and then have the opportunity to follow the patient for several days, learning how the expected physiological developments might be shaped by the individuality of that

5. Mitchell T. Rabkin, "The SAG Index," *New England Journal of Medicine,* 1982, *307*:1350–1351; Mitchell T. Rabkin, "The Teaching Hospital and Medical Education: One-Room Schoolhouse, Multiversity, Dinosaur?," *Journal of Medical Education,* 1985, *60*:92–97.

particular patient, an individuality the student had come to appreciate before the surgery commenced. Disease is an experiment of nature, and the capable physician must make many observations in order to understand best both the causative agent and the individual in whom it is acting.

By contrast, the first contact of today's student might well be with the patient already anesthetized and fully draped in the operating room, that is, little more than a rectangle of exposed skin surrounded by sterile drapes. The first verbal interchanges between student and patient will then be minimal, with the patient coming out of anesthesia and recovering from surgery, and there will be precious little background for the student to evaluate that exquisite individuality of the patient's manifestation of a disease. While it is beyond the scope of this article to project the educational impact on physician quality that today's changes in care may provoke over the next several decades, the consequences on the development of medical mastery emerging from contemporary economic influences on hospital care should not be underestimated.

Since control of hospital utilization has reduced the inpatient census in most hospitals, it could be argued that the physician still retains a commanding authority, since it is he or she who decides whether and where to hospitalize. While some power has shifted to third-party payers in their definition of which hospital stays will or will not be paid for, this view holds that the primacy of the physician in the power structure of the hospital remains. But increasingly, the third-party payer decides with which hospitals it will — and will not — deal. While a hospital will work to retain the loyalty of its physicians so that they do not press to admit patients elsewhere, the old physician role of un-opposable dominance has disappeared. For example, should the physician — in the utilization of hospital resources — commit more dollars than third parties will pay for the care of the patient, both the hospital and the fellow physicians will find that particular physician no longer so congenial a colleague; on the most basic level, that physician is losing money for the hospital and dissipating what economic gains might have been achieved through the prudent behavior of others. In such a situation, encouragement to stay and fill the hospital's beds has lost its underlying economic basis. Furthermore, since capitated payment plans (payment for a fixed amount for a full year of medical care, as opposed to fee-for-service arrangements) are increasingly the mode, the loyalty of the physician must now extend beyond merely admit-

ting patients to the hospital to handling them in every aspect within the rules negotiated with the third-party payer. One goal of such arrangements is to keep the patient out of the hospital, and the committed physician and hospital must side with that directive within the limits of clinical judgment. Thus, payment modalities have changed, the hegemony of the physician in the hospital is evaporating even though clinical authority remains, and the hospital's former goals of full bed occupancy and greater utilization have become qualified and tempered.

Concurrent with the ascendancy of third-party payers in shaping patterns of clinical care within the hospital is their influence in altering the roles of hospital trustee and administrator. In the past, the governing style of some hospital trustees has been incongruous with what is considered responsible management behavior in the business sector. Under cost reimbursement, trustees sanctioned generous hospital spending, just as did government and third-party payers, yet simultaneously the trustee-businessman's requirement was to be prudent in health care expenses where his own business was concerned. Such inconsistency was generally ignored until the economic decline of the early 1980s, when trustees realized that expenditures at the hospital could no longer be considered someone else's issue and of no consequence to the bottom line of their own businesses. Because the health care premiums they pay as employers are determined in no small measure by the expenditures they sanction as hospital trustees, trustees themselves are developing more rigorous standards of performance for hospitals and new requirements of accountability for administrators, as well as new standards of prudent economic behavior for their physicians.

For the administrators, the task is still to manage the hospital, but the nature of that task is changing. With cost reimbursement no longer the mode, sound business performance has become a fundamental requirement. Sophisticated payers no longer write checks in the amount of the hospital's charges. Aware of their power as controllers of significant segments of the market, they negotiate with hospitals for discounts which call not only for sharp cost accounting by the hospital but also for new business judgments in the short term, not to mention sophisticated, long-term overall strategic planning by the hospital administrator. No longer is the administrator simply running a doctor's workshop where generous trustees make up the difference if Blue Cross and other third-party payers do not happen to come up with the dollars. Hospitals have

become complex big businesses, and management decisions can make the difference between life and death for the institution. As a result, the training of hospital administrators has become oriented more toward business and management than toward health policy and public health.

Standards of performance for hospital administrators are rising; trustees are not hesitant to make changes in management on the basis of business acumen and bottom-line performance. Of course, physicians' voices still have power and can undo the tenure of many administrators, but the growing sophistication of trustees is making the grounds for economic dissatisfaction pre-empt whatever else may be fueling the physicians' complaints. Physicians themselves are also being brought into the management matrix, in order that their clinical and personal judgments may inform administrators' and trustees' conclusions about what is possible for the hospital in today's business environment.

Thus, as a result of external, primarily economic, forces, the basic power to generate revenue for the hospital has shifted from doctor to payer. And the roles of doctor, patient, administrator, and trustee have all changed in important respects, even while the basic nature of the hospital — that of nurturing a class of infirm individuals and providing the substrate for the appropriate medical input — has remained constant.

Internal Influence: the Fragmentation of Care

Developments within the hospital are reshaping its sociology as much as developments from without. Not only is there an overall increase in the intensity of hospitalized illness, for economic reasons, but advances in medical technology have led to a striking growth in the complexities of diagnosis and treatment, as Steven Schroeder discusses elsewhere in this issue. Inevitably, such intensification tends to concentrate the focus more on disembodied pathology and less on the individual. Increasingly, the physician in the hospital is not the one who cares for the patient at home; fragmentation and resulting depersonalization of care are seemingly inevitable by-products of such specialization. Technology has joined with economic necessity to create a system that is less "consumer-oriented" and, instead, more "product-oriented."[6]

6. Theodore Levitt, "Marketing Myopia," *Harvard Business Review*, 1960, 38:45–56.

The growth in technology and specialization has brought numbers of highly skilled professionals to the patient's bedside, not only physicians and nurses but also chest physical therapists, nutritionists, respiratory therapists, and the like. To counteract the alienation a patient often feels in the midst of this phalanx of diagnostic and therapeutic participants, hospitals are seeking to restore wholeness to the patient's experience through emphasizing patient advocacy, patients' rights, and informed consent; broadening the involvement of hospital social service staff; and increasing attention to ethics in the patient care process.[7] While such efforts are important, they do not get to the fundamental issue in the depersonalization of hospital care: the social infrastructure of the care process itself, in which nursing, as noted at the outset, plays the critical role.

"Primary Nursing" Personalizes Care

One of the most important efforts to combat depersonalization of care has been the development of "primary nursing."[8] At Boston's Beth Israel Hospital, a system of primary nursing has operated successfully throughout the institution for over 15 years. Primary nursing is a system of deploying nursing staff on a patient unit whereby a specific nurse, the primary nurse, is assigned both the authority to develop and the accountability for implementing the nursing care plans for specific patients. Using the physician's assessment and medical care plan, along with his or her own professional nursing assessment, the primary nurse develops a plan for fulfilling the nursing care needs of each patient: the primary nurse views nursing in its broadest perspective, one that includes the various patient care functions characterized by Benner:

1. The helping role
2. The teaching-coaching function
3. The diagnostic and patient-monitoring function
4. The effective management of rapidly changing situations
5. The administration and monitoring of therapeutic interventions and regimens

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7. Beth Israel Hospital, *Your Rights As a Patient at Beth Israel Hospital* (Boston, MA: Beth Israel Hospital, 1972); American Hospital Association, *A Patient's Bill of Rights* (Chicago, IL: American Hospital Association, 1972).

8. Joyce C. Clifford, "Primary Nursing: A Contemporary Model for Delivery of Care," *American Journal of Hospital Pharmacology,* 1980, *37*:1089–1091; Joyce C. Clifford, "Professional Nursing Practice in a Hospital Setting," in Linda H. Aiken, ed., *Nursing in the 1980s* (Philadelphia, PA: J. B. Lippincott Co., 1982).

6. The monitoring — and ensuring — of the quality of health care practices[9]

It is important that face-to-face contact takes place between the primary nurse and the patient. Thus, while also directing the work of others, the primary nurse takes the lead in hands-on delivery of the actual nursing care, ranging from monitoring and controlling the complex technology being applied to the patient to carrying out the most mundane personal hygiene activities, all of which hold opportunities for the exercise of professional judgment. Such direct involvement gives the primary nurse opportunity to observe directly not only the physiological and psychological status of the patient and the interactions of all the specialists brought to bear on the patient's problems, but also to learn the extent of the patient's understanding of the disease, the patient's place in his or her family constellation, and the family's understanding of and reaction to the patient's illness. Bringing this information together, the primary nurse furthers both his or her own insight and that of the physician, so that each, collegially, can move forward in their coordinated plans of care.

The primary nurse conveys to nurses on other shifts the nursing care plan which is to be followed. From those other nurses, the primary nurse receives reports of the events that transpire during the hours when he or she is not personally on the patient unit. With 24-hour accountability, the primary nurse not only integrates most of the technical events of the patient's otherwise fragmented experience, so that both nurse and physician can more readily assess all that has happened and make decisions accordingly, but also fulfills additional professional roles as patient advocate, counselor, educator, evaluator of the patient's understanding of the illness, and forecaster of the ability of the patient and family to cope.

In these ways, primary nursing represents the renewal of a role long utilized in hospital nursing care. From the origins of the hospital until recently, most patient care was provided in open wards housing 16 to 20 or more patients. In the center of those wards was a "head nurse" whose tasks included knowing what was happening with each of her patients. The head nurse developed the nursing care plans much as the primary nurse does today. Other nurses worked with her in delivering hands-on nursing care; those on other

9. Patricia Benner, *From Novice to Expert: Excellence and Power in Clinical Nursing Practice* (Menlo Park, CA: Addison-Wesley, 1984).

shifts responded to her directives and reported to her on the events taking place during her absence. The head nurse's relationship with the ward physicians was more that of colleague and peer than of subordinate.

However, as the multi-bedded open wards of hospitals made way for long corridors with semiprivate and private patient rooms, nursing tasks became distributed in a different fashion, for "efficiency." The "team" concept became dominant, wherein one nurse might be assigned the task of recording vital signs (blood pressure, pulse, respiratory rate, temperature) on all the patients. Another nurse and an aide might change the bed linen. Yet another might do bed baths, and so on. No nurse really knew any one patient well, nor did any have specific accountability for individual patients.

By contrast, primary nursing reworks that older and more successful deployment of role and responsibility carried out in the open ward. In today's fragmented hospital environment, the successful implementation of primary nursing reverses the additional fragmentation inevitable under team nursing despite its best of intentions. Primary nursing reasserts the primacy of nurturing and nursing in an otherwise less encouraging hospital environment.

Fostering Cohesiveness among Caregivers

Intensity and fragmentation within the hospital affect the social organization of all caregivers. Spirit often seems higher in intensive care units than on general patient floors, perhaps due to cohesiveness engendered by the stress of dealing with extreme illness and the constant threat of death. Because mutual support is so important in dealing with work-related stress, efforts are under way to foster cohesiveness in all patient units. One approach, implemented at a few teaching hospitals, is the formation of "firms," which tend to mimic the English teaching-hospital system of small units under the command of an individual professor. In the "firm" concept, house staff return to the same unit repeatedly as they rotate among varying clinical experiences, patients are re-admitted to the same unit, and senior physicians tend to have all of their own inpatients located on the same unit. As a result, more cohesive sub-units of a larger department of medicine may be formed, where physician, nurse, and patient get to know each other more closely, work with each other more frequently, return to each other as old friends and col-

leagues, and are better able to support each other professionally and psychologically.

Such personal ties foster closer identification of caregivers with patients and of colleagues with each other, helping to work against the inroads of depersonalization. Perhaps no institution has so wide a spectrum of co-workers as team members — in terms of social class, education, and income — as does the hospital. To the extent that team members' intrinsic social distances and disparities are minimized in the work situation, the tasks of hospital work are facilitated and the employee's warmth and generosity of concern for the patient will be more readily forthcoming. It seems likely that the secure employee identifies better with patients because a sense of belonging within the caregiving team encourages an outreach less readily constricted by differences in social class or education.

Future Changes in Roles and Relationships

Such developments as primary nursing and firms illustrate the evolution in hospital roles and relationships in response to changing modes of care. That evolution also provokes the question of whether the staffing of today's patient care unit will be appropriate for the care to be delivered tomorrow. The mix of nurses, house officers, senior physicians, medical students, and others on today's patient care unit is similar to that of 20 or 40 years ago. But the nature of the patient and the diagnostic and therapeutic processes of tomorrow will be markedly different from those of yesterday. Already, the tasks of care-givers on the patient units are changing. For example, nurses now perform many activities formerly done only by physicians, tasks that have become so complex that many physicians today cannot even approach them with any degree of mastery. What further changes will occur in these roles, their boundaries, and their interactions?

There are other pressures for changes in the staffing pattern of patient care units. In the teaching hospital, for example, as patients present increasingly intense and complex illness, the patient care unit becomes less useful as a place to teach basic clinical medicine to students. Even for providing the experience to prepare interns and residents for their future responsibilities, the inpatient unit is increasingly problematic. Yet medical students, to some extent, and house officers, to a large extent, also carry out service responsibilities. Redirecting these individuals for teaching purposes from the

inpatient unit to less intense ambulatory care practice at the hospital and elsewhere will also mean the loss of a significant component of the patient care service function as well. What is needed is a reconsideration of who can best provide the various aspects of the patient's care. The result will likely be further evolution in the roles of nurses, senior physicians, and other providers of health care — and yet new staffing patterns.

Evolution of new clinical responsibilities and interactions will be influenced by economics as well. If the predicted national surfeit of physicians develops, some tasks now handsomely done by nurses may be claimed by physicians as requiring their unique expertise. The growth in other, more remunerative career options for women has required significant salary escalation for professional nurses. The outcomes of such tensions will also tend to reshape the roles and relationships of caregivers.

Important role considerations also extend to the so-called nonprofessionals. Charting the interpersonal contacts of patients reveals that significant time is spent with unit aides, transporters, food service workers, and housekeepers. It is critical that management appreciate the power for good these hospital employees have and can exercise day-to-day, a power for good separate and complementary to that which the professionals themselves carry.

Both illness and routine tend to make for regression; the patient's ego is assaulted in the sick role. While most professionals are diligent in attempting to support the self-image of the patient, no matter how kindly and sensitive that professional may be, he or she must think fundamentally of the patient in terms of pathology — for example, as the "cancer of the transverse colon" — because that is the reason the patient is in the hospital. The nonprofessional, on the other hand, may relate in ways more supportive of the nonregressed personality of the patient.

Here is an extraordinary opportunity to salve the wound created by illness and exacerbated by the pace and intensity of today's hospital care. If the housekeeper can be helped to see his or her role not simply in terms of the technical tasks to be done — cleaning the floor, emptying the wastebaskets — but also in terms of the meaning and uses — and limits — of his or her relationship with the patient, the hospital then has an additional force for good, a force that historically has been too little appreciated. Not only is the trained and insightful nonprofessional a valuable adjunct for good in the care of the patient, but such individuals tend to view

their roles in rather different terms than the employee who sees merely a floor to be cleaned and an eight-hour day to be consumed. Training and education of such employees will be enhanced in the effort to help them achieve greater personal fulfillment along with satisfaction of the hospital's heightened expectations for the role. But recognition of this important potential must extend to physicians and nurses, since their attitudes and actions set the tone of the colleagueship and teamwork overall, and hence the ultimate environment which nurtures the nonprofessional's impact on the patient.

The teaching hospital may have a problem of the opposite sort, where the contact of patients with medical students creates interactions with individuals whom the patient takes to "be" the hospital, even though they are identified as students of medicine. Generally well motivated and wanting to do good, the student nonetheless may be very early in the process of learning — or may never learn — the individualized values of that particular hospital, and thereby unwittingly act to undermine the institution's efforts to reassure and to comfort. Yet both hospital physicians and nurses who teach and guide students through the wards can sensitize them to this potential hindrance to the therapeutic relationship. Accordingly, doctor and nurse can help lead both medical students and other co-workers away from behavior that may undermine the positive ethos of the institution.

Changing Technologies Alter Relationships

While the level of sophistication of data processing varies widely among hospitals, emerging developments in the handling of information will alter the sociology of work relations in many of these institutions. To the extent that patient care information is handled through the computer, the tasks of physicians, nurses, and others in patient care are made easier. Patient data is more readily available and more reliably stored and transmitted. Increasingly, test results will be provided with logic and background information to help the clinician in decision making. Time will be saved; to get the result of a lab test, it is quicker to query the computer than to telephone the chemistry laboratory. On the other hand, disadvantages may accompany this more extensive use of computers: The clinical laboratory technician may never see or speak with the doctor and may miss knowing firsthand when a life was saved as a result of her

work. Such knowledge is important to job satisfaction and morale. Specific efforts will be needed to avoid this distancing which may have begun when telephones were the new technology, a distancing now greatly exacerbated as instantaneous computer interactions become the mode.

However, computer access to patient care transactions also allows for greater control. With the shift from retrospective to concurrent data management, day-by-day warnings can be voiced by medical or administrative management on both the professional quality and the economics of care that is rendered. It is likely that a tension will develop as electronic data processing expands its hospital applications, a tension between both third-party payers and managers, who argue for greater monitoring and control, and the clinicians, who see the computer more as a device to make information better available for their clinical judgments and for more informed management choices. Thoughtful decision making by humans will make the difference.

The mixed blessings of the new electronic technologies will also provide challenges in other arenas. For example, the capacity to produce hard copy medical records directly from dictation already exists and may ultimately be applied, at least in some hospitals. Whether such technology will be a time-saver remains to be seen, for the tendency of the tired clinician may be to dictate with even less clarity than exists in the handwriting of most physicians' medical record entries today. More encouraging may be the projected uses of interactive videodisc with computer for teaching. Yet to the extent that the medical student and house staff are removed from the actual patient, the overall impact of interactive video on both patient care and student learning will have to be carefully evaluated. One additional caution, of course, lies in the question of cost. Such intriguing technology will make its way into the hospital only to the extent that it can justify itself economically, that is, if it can replace the current deployment of other resources and, ideally, decrease the overall cost of care.

Medicine — A Changing Profession

Concurrent with, and embodied in, the evolution of the hospital itself in recent years have been changes in demographics and attitudes of the medical profession. Nowadays, 30 to 40 percent of most entering classes of medical students are women, and their

distribution within the profession has moved well beyond those specialties formerly deemed "appropriate" for women to *all* fields of medicine. Many feel the change is long overdue, that the contemporary woman has reasserted the caring role of the physician and is leading a renaissance of warm and human focus to parallel the advances in technology. Meanwhile, patient perceptions of traditional male and female roles in health care are changing, too. While there are still relatively fewer men in nursing than women in medicine, most patients today seem to accept each in either role, and their response to minorities as physicians appears to be changing favorably as well. In part, these attitudinal changes may be influenced by the self-perceptions of young physicians. For example, looking at the relaxed dress code of today's young physicians and nurses, patients may find it difficult at times to distinguish between female house staff and nurses, although careful scrutiny makes the point that nurses may wear white slacks and female house officers seem not to, but both young doctors and nurses wear their stethoscopes draped about their necks. Overall, the similarities in appearance may symbolize a growing appreciation of the professionalism of nursing and its collegial relationships with medicine, as well as more relaxed attitudes about dress *per se* and about male/female relationships. Lifestyle goals also seem to receive more emphasis among young professionals today; the phrase "freedom from the job, not within it," foretells a growth in the number of employed physicians over individual entrepreneurs and suggests that adaptations such as job-sharing in medicine may become increasingly popular.

Nevertheless, with growing economic pressure on the physician, the profession may diminish in its attractiveness. The number of applicants to medical schools has begun to decline and now seems stabilized, although quality has not fallen among those accepted. Because the basic gratifications of being a doctor remain unchanged — the exquisite privilege and responsibility of caring for others, the opportunity to participate in the unfolding scientific saga of medicine — today's slowing interest may also reflect the growing bureaucratism of medicine, its paperwork, liability issues, and other uncertainties. To the extent that the hospital evolves to contend with such troublesome matters, it may take on new character and capability, encouraging the more basic art and science of medicine to flourish.

Already, today, there is a realization by medical staff in many institutions that their growing discomfiture is not the aim of a malignant hospital administration but rather the result of external forces which have an impact on both the physician's practice and the hospital's operations. New alliances are thus being formed between physicians, who have the clinical skills, and hospital administrators, who have the business skills and access to material resources. Such a combination is found increasingly useful in setting up new partnerships, promising to render both physician and hospital less vulnerable to these outside forces that have so dramatically changed both their own worlds and that of their patients.

Conclusion

As the twentieth century draws to a close, we see the hospital being reshaped by forces that are both within and outside its walls. To the extent that those who comprise the hospital are capable of planning and managing these changes, the hospital will be much less a passive and vulnerable institution swept along in the face of change. Today's call is for insight, understanding, and cooperation among medical staff, trustees, administration, and hospital employees and, ultimately, among governments, businesses, and insurers.

But what about the patient? Confronted with health care providers who feel stretched to the limit by the pressures of third-party payers, and facing a choice of health care options defined by what will and will not be paid for, will the patient be relegated to insignificance? Such a scenario seems unlikely, at least from the pattern of growing inquiry by patients for full disclosure of both the nature of their maladies and the details of proposed hospital diagnostic and therapeutic processes. Not only is informed consent more clearly delineated and mandated than in the past, but both patient and caregiver exercise less denial than in the past of life-threatening illness, such as cancer. That openness symbolizes changing perceptions of the role of the patient, and perhaps, greater mastery by the patient in making choices in health care. Since the environment will remain increasingly competitive for the third-party payer's dollar, the patient's satisfaction must ultimately be courted by the third-party payer as well as by the hospital and doctor: otherwise, that dollar will move elsewhere. It is reassuring, therefore, to anticipate that responsiveness to patients by hospitals, physicians, nurses, and others will be strong and vibrant, engendering change for the lasting

benefit of patients, regardless of the pressures evolving in the economics and technology of care.

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The Future of the Hospital: An Economist's Perspective

FRANK A. SLOAN

Introduction

The hospital industry, like the American health care system more generally, is in a period of rapid transition. The method of payment is changing from a retrospective, cost-based approach to a prospective payment system that places the hospital at risk for cost overruns. Purchasers of health care services, in general, and hospital care, in particular, are beginning to exercise their market power at the same time the power of national medical and hospital associations is declining. Hospitals are changing from a social service orientation to a business orientation in their financial decision making and in marketing their services. The number of firms in the hospital industry has been reduced by mergers and acquisitions. Combinations among hospitals and between hospitals and other types of organizations were more frequent in the 1980s than previously. Projection is difficult, particularly during such turbulent times, yet the general course of change is clear — and irreversible.

Several factors were responsible for the developments that unfolded during the 1980s. Passage of a unified national health insurance plan seems to be at best a distant prospect. Rather, pluralistic approaches, with a multiplicity of private and public health insurance plans coexisting, and often competing, have gained general acceptance. Regulatory programs of earlier decades, such as health planning and certificate of need, have failed to constrain the growth of health care costs or even to fulfill their promise of facility consolidation.[1] All-payer hospital rate and revenue regulation offers greater potential for cost containment, but states have been reluctant to adopt it. If anything, this approach seems to be losing popularity. Pressures on business and governments to limit growth in health care outlays are mounting, but rather than act in concert, individual

1. P. L. Joskow, *Controlling Hospital Costs: The Role of Government Regulation* (Cambridge, MA: MIT Press, 1981); D. S. Salkever and T. W. Bice, *Hospital Certificate-of-Need Controls: Impact on Investment, Costs, and Use* (Washington, DC: American Enterprise Institute, 1979); Frank A. Sloan, "Government and the Regulation of Hospital Care," *American Economic Review*, 1982, 72:196–201.

Transactions & Studies of the College of Physicians of Philadelphia Ser. 5, Vol. 12, No. 2 (1990); 227-262
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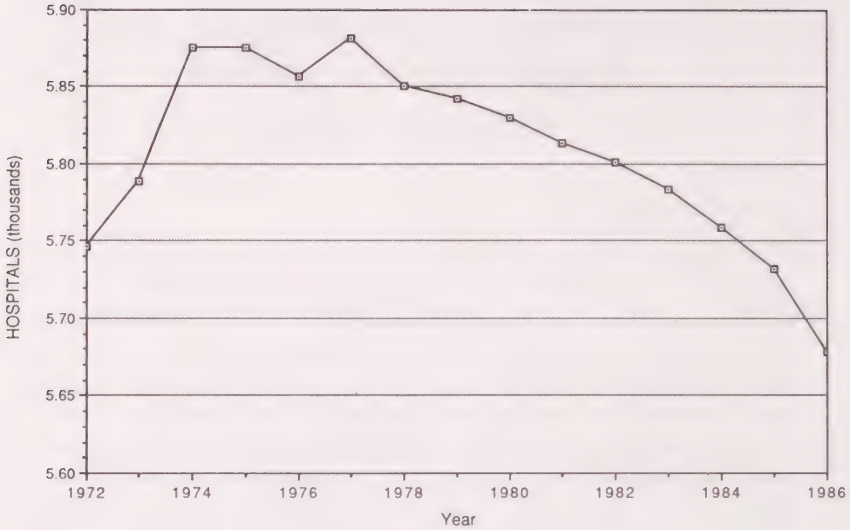

Figure 1. Community hospitals (in thousands), 1972–1986.
Courtesy of the American Hospital Association, 1987.

businesses and governments are pursuing their cost containment actions independently. Looking ahead, there is no reason to believe that the drive toward cost containment will diminish in the coming years. Most likely, it will accelerate.

Grafted atop cost concerns is concern over the expansive growth in supply of health care resources — although hospital bed supply is no longer increasing. The total number of nonfederal short-term general and other special hospitals, that is, "community hospitals," reached its peak in 1977 (See Fig. 1), as did total beds in such hospitals in 1983 (See Fig. 2). The number of inpatient days was highest in 1981 and declined from around 280 million to around 230 million between 1981 and 1986 (See Fig. 3). Yet, there was ample supply relative to present and future demand to bring about reductions in the price of hospital care. The rapid expansion of physician supply, which still shows no signs of abating, has greatly weakened physicians' market and political power. There are now large numbers of young doctors available for employment by delivery systems competing with the traditional fee-for-service system. Since physicians spend about two-fifths of their practice time in hospitals and, in addition, have had dominant roles in alloca-

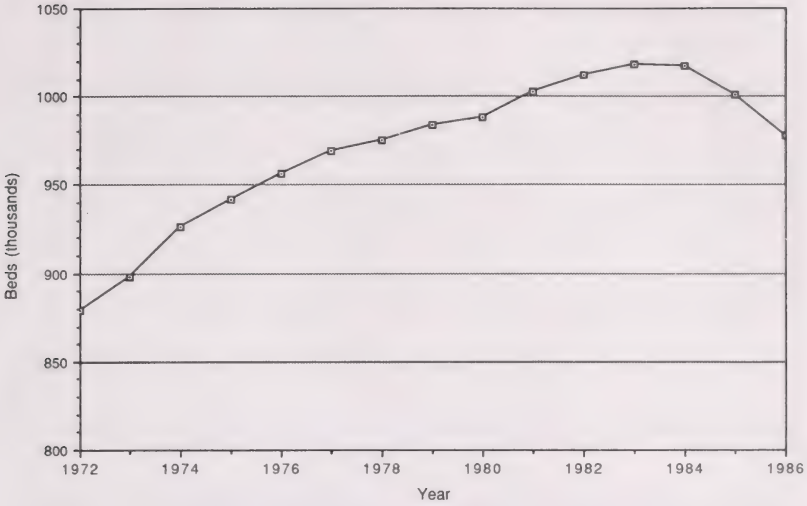

Figure 2. Beds in community hospitals, 1972–1986.
Courtesy of the American Hospital Association, 1987.

tive decision making in hospitals, at least until now, these developments have major potential consequences for the hospital industry (See Mitchell Rabkin, this issue).[2] With the physician-to-bed ratio far higher than at present, hospitals will increasingly gain bargaining power relative to physicians (See Steven Schroeder, this issue).

Technological change is playing two major roles. First, some diagnostic, therapeutic, and surgical techniques have been perfected to the point that they can be performed in non-hospital settings. Thus, freestanding ambulatory diagnostic and surgical facilities compete with hospitals. Home health agencies provide care heretofore available only in hospitals. Second, at the same time, new procedures are being developed that can be performed in hospitals *only*. For example, in 1981 Medicare alone spent about $1.3 billion on coronary bypass surgery and total hip replacements.[3] These procedures were experimental only a decade and a half ago, and various transplant and microsurgical procedures are just now begin-

2. Frank A. Sloan, "Physicians and Hospitals: Implications of an Expanding Physician Supply," in E. Ginzberg and M. Ostow, eds., *The Coming Physician Surplus: In Search of a Public Policy* (Totowa, NJ: Rowman and Allaheld, 1984), pp. 99–115.

3. Joseph Valvona and Frank A. Sloan, "Rising Rates of Surgery among the Elderly," *Health Affairs,* 1985, *14*:108–119.

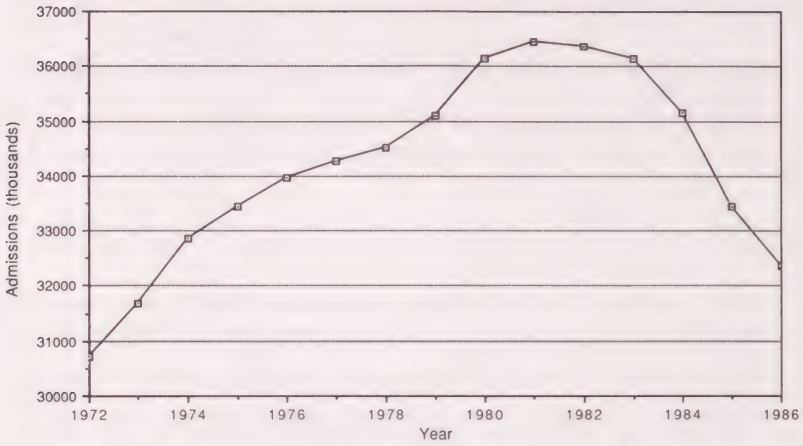

Figure 3. Inpatient admissions to community hospitals, 1972– 1986.
Courtesy of the American Hospital Association, 1987.

ning to diffuse within the medical community. Without such new products, the prospect for future demand for hospital care would be far bleaker than it is. Medicare and other payers may some day be forced by cost pressures to set explicit utilization criteria, such as age, on specific procedures, but as of the late 1980s, this seems yet to be a distant prospect.[4]

Certain delivery organizations that were still novel in the 1960s developed a track record by the mid-1980s and have become permanent fixtures. One is the capitation plan made operational in the form of the Health Maintenance Organization (HMO). Another is the Preferred Provider Organization (PPO). Yet another is the multihospital system. Although still controversial, for-profit hospital companies are here to stay. In 1986 they constituted 14.7 percent of community hospitals (See Fig. 4).

The same factors currently stimulating change should continue as forces shaping the hospital industry during the next quarter century. However, it is doubtful that the growth of the U. S. economy will be sufficient to generate the type of dividend paid out during the 1960s in the form of increased public program support. The United States now competes with other countries in product

4. See H. J. Aaron and W. B. Schwartz, *The Painful Prescription: Rationing Hospital Care* (Washington, DC: The Brookings Institution, 1984).

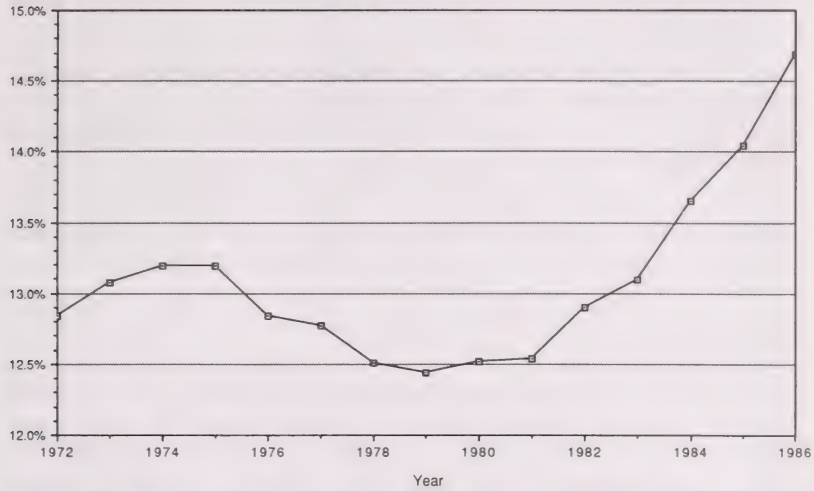

Figure 4. For-profit hospitals as a percent of community hospitals, 1972–1986.
Courtesy of the American Hospital Association, 1987.

markets for a large range of goods and services to a far greater extent than previously. Thus, it is becoming increasingly difficult for firms to shift higher premiums forward to buyers in the form of higher product prices. After a brief lull during the 1990s, the population of the United States will continue to age.[5] The development of new products for use in diagnosis and treatment of an increasingly elderly population will continue.

Public grants for hospital construction and renovation will be generally unavailable. Hospitals' access to tax-exempt debt may even be curtailed. Government subsidies of medical education will be reduced in real terms. Nevertheless, since the inflow of new and foreign medical school graduates will exceed the outflow due to deaths and retirements, there will be a sizable increase in physician supply.[6] Some have predicted that Medicare will spend no more in

5. U.S. Department of Commerce, *Statistical Abstract of the United States, 1980,* 101st edition, (Washington, DC: U.S. Government Printing Office, 1980), p. 30.

6. U.S. Department of Health and Human Services, *Fifth Report to the President and Congress on the Status of Health Personnel in the United States,* DHHS Pub. No. HRS-P-OD-86-1 (Washington, DC: U.S. Government Printing Office, 1986).

nominal terms on hospital care in 1990 than it did in the mid-1980s.[7]

This essay focuses on three interconnected topics: the consolidation of hospitals, the relationships between physicians and hospitals, and the role of the voluntary hospital. Underlying all three of these themes is the transformation of the hospital industry — and health care more generally — from a charitable social service to a business. The changing role of third-party payers also lurks behind all three, as does increased physician supply.

Consolidation

The hospital industry historically has been thought of as a "cottage industry," one with large numbers of inefficiently small and independent producing units. During the past decade, however, there has been a substantial consolidation of independent hospitals into multi-hospital systems. Although this trend is likely to continue, another more revolutionary type of consolidation involving combinations of hospitals with non-hospital organizations is also becoming evident. Paul Ellwood has predicted that the American health care system will undergo a transition from approximately 300,000 firms delivering medical care (a firm being a hospital or a doctor in his or her office) to approximately 20 "SuperMeds," vertically integrated medical care firms composed of some type of insurance mechanism, hospitals, and physicians.[8] An important characteristic of these SuperMeds is that they would use far fewer resources than currently — less than half the beds and physicians, in fact, than the present use pattern. Whereas traditional insurance spends about two dollars on hospital care for every one dollar spent on physicians' services, SuperMeds would allocate 45 percent of the dollar to hospitals and 55 percent to physicians.[9] Some, but by no means all, of the Supermeds would evolve from hospital organizations.

To place predictions such as Ellwood's in perspective, it is necessary to describe (1) the nature of the hospital consolidation that has occurred, (2) the reasons for that consolidation, and (3) the

7. "Growth Trends to Reverse, Analysts Say," *Medicine and Health*, 1985, 39:2.

8. Paul M. Ellwood, Jr., "Shaping the Irreversible Revolution: Role of Business in Health Care," in The Florida Council of 100, *Financing Health Care: The Changing Scene*, 1985, pp. 28–32.

9. R. M. Gibson, Katherine R. Levit, Helen Lazenby, and Daniel R. Waldo, "National Health Expenditures, 1983," *Health Care Financing Review*, 1984, 6:1–29.

types of forces that are likely to shape future consolidation. Then, surmising in which direction the system is evolving, what are the implications — both good and bad — for health care delivery? And what, if any, mid-course corrections should public policymakers undertake?

Types of Consolidation

Horizontal integration involves the combination of rival firms. For example, competing hospitals in the same community might merge, larger hospitals might replace smaller hospitals in the same geographic area, and (supposedly) rival hospitals might share resources. As Charles Rosenberg and David Rothman point out elsewhere in this issue, through a variety of processes the size and distribution of community hospitals has changed markedly since World War II. In 1949, for example, 69 percent of such hospitals had under one hundred beds.[10] By 1986, only 46 percent of hospitals fell into this small bed-size group.[11]

Vertical integration occurs when a firm merges with one of its suppliers (backward integration) or when a firm merges with one of its customers (forward integration). In one well-publicized case, a major hospital company, Hospital Corporation of America, attempted to merge with a hospital supply company, American Hospital Supply, a pure form of backward vertical integration.[12] Forward vertical integration occurs when hospital services are combined with purchasers of hospital services. Since the vast majority of such services are purchased by insurers, the type of forward vertical integration that best fits the textbook definition is one which combines the insurance function with provision of hospital services.[13] Vertical integration occurs when a PPO is formed by a hospital in conjunction with physicians on its medical staff. Another example is a hospital-sponsored or hospital-company-sponsored HMO. More commonly, PPOs and HMOs purchase care from selected hospitals, often at a discount, without actually merging with hospitals.[14] This

10. *Hospitals*, 1950, 24:18.

11. American Hospital Association, *Hospital Statistics, 1986 Edition* (Chicago, IL: American Hospital Association, 1987), p. 12.

12. "Merger Battle Heats Up: Wall Street Says HCA-AHSC Merger 'Dead'," *Medicine and Health*, 1985, 39:1–2.

13. For example, R. D. Blair and D. L. Kaserman, *Antitrust Economics* (Homewood, IL: Richard D. Irwin, Inc., 1985), pp. 226–228.

14. H. E. Frech III, ed., "Preferred Provider Organizations and Health Care Competition," in *Health Care in America: The Political Economy of Hospitals and*

strategy does not constitute vertical integration but rather presumably involves arm's-length bargaining between independent organizations, each acting in its own best interests.

Conglomerate merger, as the term is used by the Federal Trade Commission (FTC), involves mergers that cannot be classified as either horizontal or vertical.[15] The FTC distinguishes among three types of conglomerate mergers:

1. Market-extension mergers, in which the firms involved in the combination do the same thing but in different geographic markets.
2. Product-extension mergers, in which the outputs of the partners are not sold competitively but rather have some functional relationship to one another in production and/or in distribution — such as occurred when Proctor and Gamble Company, the dominant producer of household soaps and cleansers, merged with Clorox Chemical Company, the leading producer of household bleach.[16]
3. Other conglomerate mergers, in which the outputs of the partners are unrelated — such as the acquisition of Grinnell Corporation, a large producer of automatic sprinkler systems and devices, by International Telephone and Telegraph, a large diversified company which had not previously been involved in sprinkler systems.[17]

The combination of hospitals into larger producing units and/or into multi-hospital systems is an example of a market-extension conglomerate merger. Such integration has been proceeding at a rapid pace in recent years. The growth rate of hospitals controlled by multi-hospital systems, both for-profit and nonprofit, is, if anything, accelerating. In 1975, 25 percent of hospitals were owned, leased, sponsored, or contract-managed by a single corporate entity.[18] By 1983, 35 percent of hospitals and 38 percent of commu-

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Health Insurance (San Francisco, CA: Pacific Research Institute for Public Policy, 1988), pp. 353–370; A. R. Palmer, *Economics of Participation in Preferred Provider Organizations,* Pub. No. R-3228-HHS (Santa Monica, CA: Rand Corporation, 1985).

15. P. Asch, *Industrial Organization and Antitrust Policy* (New York: John Wiley & Sons, 1983), p. 263.

16. Blair and Kaserman, *Antitrust Economics,* pp. 443–444.

17. Ibid., pp. 448–449.

18. D. Ermann and J. R. Gabel, "Multihospital Systems: Issues and Empirical Findings," *Health Affairs,* 1984, 3:52.

nity hospital beds belonged to multi-hospital systems.[19] Arrangements under multi-hospital systems are varied and multifaceted. The "tightest" arrangements are among hospitals in investor-owned chains, but even among hospital companies there is appreciable variation in the amount of individual hospital autonomy permitted. Hospitals under contract management presumably still maintain independent control. If the hospital board is dissatisfied with the performance of the contract managers, it need not renew the contract. "Sponsored" hospitals typically have a relationship with a religious organization. The sponsored hospital usually receives at most minor subsidies from its sponsor and the hospital exercises a considerable amount of local autonomy. One could well argue that only "owned" multi-system hospitals are truly integrated.

Product-extension conglomerate mergers include combinations of inpatient facilities with inpatient aftercare facilities — nursing homes, geriatric outpatient units, day care, home health care, hospices, and various types of ambulatory care services, such as outpatient dialysis, outpatient alcohol treatment, and urgent care centers.

An "other" conglomerate merger occurs when, for example, a hospital acquires or combines with a non-health-care enterprise, such as a real estate business.

Forces Leading to Horizontal Integration

Economies of Scale. Economies of scale can potentially occur from several sources: production of a good or service, marketing, distribution, and acquisition of inputs.

Scale economies in production typically arise because an input, often plant and equipment, cannot be employed in a small quantity. In the hospital industry, such "lumpy" inputs include certain types of major movable equipment; specialized teams, such as those needed for open heart surgery; and administrative overhead. New technologies for diagnosis, for example, are sometimes embodied in expensive equipment such as that used for nuclear magnetic resonance. In this sense, technological change is responsible for increased scale economies in producing hospital care. It may not be necessary for small hospitals to combine or to close and be replaced by a larger facility to achieve scale economies. In some cases, more efficient utilization of equipment and personnel can be achieved

19. J. A. Alexander, B. L. Lewis, and Michael A. Morrisey, "Acquisition Strategies of Multihospital Systems," *Health Affairs,* 1985, 4:50.

through service sharing. Compared to other factors in cost variation among hospitals, such as case mix, scope of services, and input price differences, economies of scale in production are relatively unimportant.[20]

Distribution economies do not arise in the production of a service. They provide an explanation for large firm size in some other industries, such as electricity and natural gas — because of scale economies in transmission.[21]

Motive to Monopolize. Hospitals may also combine in order to establish monopoly power in a market area. Given the predominance of traditional modes of third-party payment, however, individual hospitals until recently have had a substantial amount of monopoly power without merging and probably have not combined for this purpose.[22] With the growth of price competition in the hospital industry, as reflected in the increase in HMO and PPO enrollments and the few instances of competitive bidding, more hospitals will desire to merge for this reason in the future. If the hospitals in a community merge, they will be in a stronger bargaining position in relation to aggressive insurers.

Excess Capacity. Hospitals also combine in areas with excess capacity. If, instead of merging, each hospital were to reduce its capacity, the resulting hospitals would be inefficiently small. Such excess capacity usually arises from a drop in demand and appears to be occurring in rural areas in particular.[23]

Forces Leading to Vertical Integration

Growth of Alternative Delivery Systems. There has been substantial growth in plans that combine financing with provision of health care services. Physicians are necessarily part of "alternative delivery systems." Hospitals are typically paid on a fee-for-service basis,

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20. For references to empirical studies of scale economies in hospitals, see W. B. Schwartz and P. L. Joskow, "Duplicated Hospital Facilities: How Much Can We Save by Consolidating Them?" *New England Journal of Medicine,* 1980, *303*:1449–1457.

21. S. Breyer, *Regulation and Its Reform* (Cambridge, MA: Harvard University Press, 1982).

22. D. S. Salkever, "Competition among Hospitals," in W. Greenberg, ed., *Competition in the Health Care Sector: Past, Present, and Future* (Germantown, MD: Aspen Systems Corp., 1978).

23. M. Cherskov, "What's Driving Upcoming Mergers," *Hospitals,* 1987; *61*:36–40.

albeit at a reduced price. By 1982, most community hospitals had agreements with HMOs.[24]

Some hospital companies facing excess capacity are themselves establishing HMOs.[25] Hospitals are also affiliating with PPOs, either under their own sponsorship or in affiliation with an outside organization.[26] Hospital participation in PPOs typically requires that the hospital offer a discount on its usual charges and/or engage in some form of utilization review, including pre-admission screening and length-of-stay review. The hospital can gain from participation only if it can attract large numbers of patients it otherwise would be unable to attract.[27] Frech has described a PPO as a "Mexican or Chinese restaurant that offers hamburgers. It gains much acceptance by families, where previously one American food lover in the family would have vetoed such an exotic eating spot."[28] The PPO also offers many of the cost containment features of the closed-panel HMO but allows a family with a close pre-existing relationship with a physician to keep seeing that physician (assuming the physician chooses to participate).

Reduction in Transaction Cost. One major reason for vertical integration is reduction in transaction cost, that is, the expenditure of resources when transferring a good or service from one party to another. Vertical integration may save on three types of transaction cost:

1. The search cost that the buyer incurs in attempting to find the lowest quality-adjusted price.
2. The cost of negotiating the terms of the transaction (quality, warranties, delivery dates, etc., as well as price and quantity).
3. The cost of reduced flexibility associated with market transactions that utilize long-term contracts.

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24. Unpublished tabulation from the American Hospital Association's 1982 annual survey of hospitals.

25. E. Friedman, "A Decisive Decade for HMOs: Health Maintenance Organizations' Slow Start Has Been Superseded by Rapid Growth and a Market Revolution," *Hospitals*, 1984, *58*:96–99; J. M. Edelston, S. T. Valentine, and D. Ginoza, "PPA Contracting: A California Experience," *Hospitals*, 1985, *59*:81–83.

26. G. F. Anderson and J. Studnicki, "Insurers Competing with Providers," *Hospitals*, 1985, *59*:64–66.

27. Palmer, *Economics of Participation in Preferred Provider Organizations*.

28. Frech, "Preferred Provider Organizations and Health Care Competition," p. 356.

Presumably, the major justification for combining provision of hospital care with financing relates to the second type of transaction cost saving, which in this context is monitoring of utilization. Outright control of a hospital may facilitate utilization review by a payer. It is difficult to see that any payer of more than a trivial size would save on information cost by merging with a hospital. Nor would it appear to be necessary for contracts to be so long-term as to justify mergers for this reason.

Economies from Vertical Integration. An argument for the planned merger of Hospital Corporation of America (HCA) and American Hospital Supply (AHS) was that HCA hospitals would provide a guaranteed market for hospital supplies and laboratories for developing new technologies. However, threatened boycotts of AHS by voluntary hospitals reduced the prospective advantage of a guaranteed market. Combining research and development with the delivery of hospital care may offer some advantages in marketing, but it is not clear that vertical integration is a more efficient arrangement than contracting with selected hospitals during the development phase of the research and development process.

The general literature on mergers describes technological interdependencies as a reason for vertical integration. For example, it is advantageous for a firm in the steel industry to own blast furnaces, converters, and reduction mills, thereby avoiding the necessity of reheating steel as it moves from one stage of production to the next.[29] Technological inter-dependencies between research and development and delivery of hospital care are far less obvious.

Forces Leading to Market Extension Conglomerate Mergers

Incentives for market extension and product extension mergers involving hospitals differ and, hence, should be considered separately. Market extension mergers are said to occur for the following reasons.

Economies in Input Purchasing. Suppliers of inputs to hospitals achieve scale economies in marketing and distribution when they deal with large hospital purchasers. For this reason, such suppliers are often willing to sell their products to large purchasers at a sizable discount. Large purchasing groups may be formed to provide independent hospitals with supplies at a lower price.

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29. Blair and Kaserman, *Antitrust Economics,* p. 292.

An alleged advantage of hospitals belonging to multi-hospital systems is the ability to attract capital at a lower cost.[30] Comparisons of bond ratings between system and non-system hospitals show that system hospitals tend to have somewhat better bond ratings. Empirical analysis indicates that bond ratings have only a minor impact on the cost of debt capital.[31] More generally, although the cost of debt capital is slightly lower for system hospitals, this difference is small compared to the difference between the for-profits and hospitals in other ownership categories; the for-profits, which tend to be more highly leveraged, pay a much higher price for debt capital.

Motive to Monopolize. Market power can be achieved by establishing referral networks among hospitals in a multi-hospital system with varying degrees of technological sophistication. Such referral networks may include a Standard Metropolitan Statistical Area (SMSA) and surrounding rural areas. Medical staffs of hospitals can be given incentives or coerced to participate in referral arrangements that work to the advantage of hospital members of the system.

Economies of Scale. Hospitals have only recently begun to market their services explicitly to prospective patients; therefore, economies of scale in marketing cannot explain horizontal integration trends to date. Yet, to the extent that hospitals will seek to establish "brand loyalty," economies of scale in marketing may be an important reason for vertical integration in the future.

Forces Leading to Product Extension Conglomerate Mergers

Product extension mergers involving hospitals reflect anomalies in the reimbursement system, a desire to diversify, and possible economies of scope.

Reimbursement Incentives. Some product extension integration is directly stimulated by the reimbursement system. When Medicare, or any other payer, compensates acute care hospitals on a per case basis, it should come as no surprise that hospitals will want to own and operate nursing homes, home health agencies, and hospice programs. Transferring patients subject to such reimburse-

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30. Ermann and Gabel, "Multihospital Systems: Issues and Empirical Findings."

31. Frank A. Sloan, Michael A. Morrisey, and Joseph Valvona, "Capital Markets and the Growth of Multihospital Systems," in L. Rossiter and R. Scheffler, eds., *Advances in Health Economics and Health Services Research*, vol. 7, (Greenwich, CT: JAI Press, 1986), pp. 83–109.

ment to a non-hospital facility earlier is profitable to the hospital, especially since it can collect separate payment on a per service or a per diem basis from the non-hospital facility. Given the likely growth in per case hospital reimbursement as private insurers adopt Medicare's prospective payment approach, this type of vertical integration appears to be only in its infancy.

Diversification. If the profit streams from two or more activities are less than perfectly correlated, a merger may reduce the variance in profit as a percentage of mean profit.[32] Lower variability in profits in turn may reduce the hospital's cost of capital. Profitability may differ among activities as a consequence of specific political decisions. For example, payment for inpatient hospital care may be reduced by a major payer at the same time that payment for a non-hospital substitute is increased.

Economies of Scope. For certain products, the total cost of production is reduced when they are produced and/or marketed together. Some health services may require common technical expertise. There may be some gains in sharing knowledge about a specific patient, for example, in the case of an inpatient facility and a home health agency.

Consolidation may offer some advantages in marketing. Although only about one-tenth of the population is hospitalized in a given year, the majority receive ambulatory care.[33] A hospital may be better able to capture subsequent admissions of the patient if it operates aftercare facilities.

Consolidation in the Future

Most of the forces that have led to consolidation in the recent past are likely to continue. The most revolutionary change by far has been the shift of power from sellers of health care services to buyers. Hospitals in the future will have to deal with buyers who are informed and concerned about price, quality, and expenditures on health care. One consequence of this trend is that hospitals will increasingly want to merge with competitors in the same market to strengthen their bargaining positions.

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32. See, for example, F. M. Scherer, *Industrial Market Structure and Economic Performance*, 2nd ed., (Chicago, IL: Rand McNally Publishing Co., 1980), pp. 104–108.

33. LuAnn Aday, Gretchen V. Fleming, and Ronald Anderson, *Access to Medical Care in the United States: Who Has it, Who Doesn't*, CHAS Research Series, No. 32 (Chicago, IL: University of Chicago Center for Health Administration Studies, 1984), pp. 45–55.

Some would argue that horizontal mergers are desirable because, in the past, competition among hospitals has stimulated the diffusion of expensive technologies and, more generally, has led to higher cost per case.[34] The argument is that under full retrospective cost- or charge-based reimbursement, neither patients nor physicians nor hospitals had any incentive to be concerned about hospital costliness. To attract physicians and, thereby, patients, hospitals acquired all kinds of expensive facilities and services. This argument had some validity in past years. But the growth of prospective payment and competitive medical plans has markedly changed the rules of the game. Hospitals with expensive, under-utilized facilities increasingly will be unable to pass such cost on to payers and patients. Thus, in the future horizontal mergers will potentially have a far different effect on the cost and price of hospital care than previously. The studies of the relationship between competition and cost should be replicated with post-1983 data. Evidence published to date is for years before 1983, the year Medicare first implemented its Prospective Payment System.

However, there is reason to question whether changes in payer practices really will lead to substantial vertical integration of the type described by Ellwood soon after Medicare's Prospective Payment System was implemented.[35] It is even more doubtful that hospitals have a comparative advantage in leading a movement toward this type of consolidation. Hospital-sponsored HMOs may well be at a competitive disadvantage in the long run, since their competitors will be able to choose among a larger set of alternative hospitals. Moreover, prices paid by HMOs may be sufficient to cover marginal cost but not enough to allow the hospital to recover some part of the joint cost. For these reasons, it is by no means inevitable that large numbers of hospitals will be operating HMOs in the future, although there will be some growth in hospital-sponsored HMOs.

Although most PPOs were provider-sponsored in 1984, the proportion of PPOs sponsored by insurance carriers and by entre-

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34. See, for example, J. C. Robinson and Harold S. Luft, "Competition and the Cost of Hospital Care," *Journal of the American Medical Association*, 1987, *257*:3241–3245; J. C. Robinson, Deborah W. Garnick, and Stephen J. McPhee, "Market and Regulatory Influences on the Availability of Coronary Angioplasty and Bypass Surgery in U.S. Hospitals," *New England Journal of Medicine*, 1987, *317*:85–90.

35. Ellwood, "Shaping the Irreversible Revolution."

preneurial organizations was increasing.[36] According to a national survey of PPOs conducted in 1985, the trend away from hospital-sponsored PPOs is quite modest. Of the PPOs founded before June 1984, 34 percent were hospital-sponsored; of those founded subsequently, 31 percent were hospital-sponsored.[37]

A payer can control utilization without actually owning and operating a hospital. The same 1985 survey revealed that insurer-sponsored PPOs were much more likely to be selective in choosing member hospitals and physicians than hospital- or physician-sponsored PPOs.[38] Being able to contract with a large number of hospitals may give the payer greater flexibility. For example, for certain sophisticated procedures for which patients can be moved, it may be desirable from standpoints of both cost and quality to arrange for hospital care at a distant location. It may often be desirable to arrange for care of rural patients outside their communities. There is empirical evidence that residents of rural areas often travel considerable distances to obtain complex and not-so-complex hospital services.[39] Hospital market areas in the future will be much larger than they have been. High-priced hospitals will find no refuge in combining financing and provision of care, although some of these hospitals will undertake such a strategy in an attempt to survive in an increasingly competitive environment. An indication of the trend toward larger market areas is the trend toward shopping for discounts on coronary bypass surgery operations.[40]

The extent to which hospitals diversify into other health care areas will depend on how the reimbursement system evolves. If Medicare retains its current Prospective Payment System and other payers adopt similar approaches, hospitals will continue to diversify as they have since about 1983. However, if capitation plans dominate, payers will generally perform the coordinating role, often by establishing contracts with efficient providers.

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36. K. A. Schroer and E. Taylor, "PPAs: Fewer Start-Ups but Better Operations," *Hospitals,* 1985, *59*:68–73.

37. J. Gabel, D. Ermann, T. Rice, and G. de Lissovoy, "The Emergence and Future of PPOs," *Journal of Health Politics, Policy and Law,* 1986, *11*:305–322.

38. T. Rice, G. de Lissovoy, J. Gabel, and D. Ermann, "The State of PPOs: Results from a National Survey," *Health Affairs,* 1985, *4*:25–40.

39. Michael A. Morrisey, Frank A. Sloan, and Joseph Valvona, "Defining Geographic Markets for Hospital Care," *Law and Contemporary Problems,* 1989, *51*:165–194.

40. "Medicare Part B Premium Rise Spurs Talk of Physician Reforms," *Medicine and Health,* 1987, *41*:1.

The capital issue as a reason for market-extension mergers has been overemphasized. In the future, a hospital's cost of capital will depend on its ability to compete on price and quality rather than on its affiliation with a multi-hospital chain. Home offices will be unable to commit funds to institutions that are persistently unprofitable.

It is possible, however, that payers will prefer to deal with hospital chains rather than with individual freestanding hospitals. One reason is standardization. The trunk airlines typically do not own the commuter airlines that feed into their systems; rather, the commuters are franchisees. In this role, individual franchise members of a chain offer uniform service to the trunk carrier. Also, if a payer only has to contract with one hospital organization per area, that is, a hospital system, it may realize savings in administrative expense.

Several factors will work against the trend toward increased consolidation. Sharing has always raised antitrust questions, and as a practical matter, as competition among hospitals increases, it may be far more difficult for competing hospitals to share.[41] Rather, there is likely to be more sharing among hospital members of the same chain.[42] Joint purchasing arrangements involving independent hospitals may become more difficult with increased competition among hospitals. Tax law also provides a disincentive for vertical integration. A voluntary hospital can only take advantage of deductions and investment tax credits if it divests itself of plant and equipment and leases it from a for-profit firm able to benefit from these tax provisions.

Potential Problems Arising from Consolidation

To the degree that consolidation promotes efficiency, it is desirable. Monopolization, however, is also a possible outcome — but, on the whole, a remote one. Consolidation could potentially lead to monopoly in the following ways.

Horizontal mergers can leave communities with only one hospital. Under the traditional retrospective cost-based or charge-based hospital reimbursement system, economists have argued that com-

41. See C. C. Havighurst, *Deregulating the Health Care Industry* (Cambridge, MA: Ballinger Publishing Co., 1982), especially pp. 31–37.

42. E. Gregory, "HCA Hospital Clusters Planned to Eliminate Competition, Duplication of Services among Facilities," *The Tennessean*, December 15, 1985, 11, 311.

petition among hospitals led to higher, not lower, prices.[43] Thus, horizontal mergers involving hospitals would not have the same effect they have in other industries. With the changes in reimbursement that are now occurring, payers will typically not be forced to deal with a sole community hospital except for provision of obstetrical and emergency care. Since hospital market areas will expand, few sole community hospitals will really have the ability to exercise monopoly power.[44] Some hospitals in the same area may continue to try to gain monopoly power, but in many cases a horizontal merger will not achieve this objective.

The future of PPOs depends in part on resolution of important antitrust issues. In an advisory opinion issued in 1983, the United States Department of Justice warned that antitrust questions might be raised if a large percentage of hospitals or a large percentage of physicians in a market area should become affiliated with a PPO.[45]

Under both cost- and charged-based retrospective reimbursement, each hospital was paid according to its cost and/or charges. For this reason, among others, most multi-hospital systems did not try to achieve uniformity among member hospitals. Rather, they tended to permit considerable autonomy at the individual hospital level. With payment no longer tailored to the individual hospital's cost and charge structure, individual member hospitals will lose appreciable decision-making power. To the extent that member hospitals of a chain in a community are run as a single unit, and, collectively, members of a single hospital chain have substantial market share, concern will arise about resulting monopoly power of the chain.

There are, however, two mitigating factors. First, payers are now becoming cost-conscious and assertive. When faced with monopoly prices, they will threaten to take their hospital business elsewhere. Admittedly, this may not be easily accomplished in the case of SMSAs as opposed to rural towns. Second, there is the threat

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43. D. S. Salkever, "Competition among Hospitals"; Robinson and Luft, "Competition and the Cost of Hospital Care"; Robinson, Garnick, and McPhee, "Market and Regulatory Influences on the Availability of Coronary Angioplasty and Bypass Surgery in U.S. Hospitals."

44. Morrisey, Sloan, and Valvona, "Defining Geographic Markets for Hospitals and the Extent of Market Concentration."

45. B. L. Costilo and P. M. Kazon, "Preferred Provider Plans: Avoiding Problems of Horizontal Price-Fixing," *Antitrust Bulletin*, 1984, 29:403–422; R. E. Youle and P. C. Daw, "Preferred Provider Organizations: An Antitrust Perspective," *Antitrust Bulletin*, 1984, 29:301–401.

to the seller who raises prices well above competitive levels of potential entry so long as the state does not maintain barriers to entry.

Consolidation is likely to have major consequences for hospital care in rural communities. In 1986, most of the under-one hundred-bed hospitals — still nearly half of all community hospitals — were located in rural counties. After various types of consolidation, there will be many fewer rural hospitals and many of the survivors will have more limited clinical roles than now. In many cases, patients will not be adversely affected because travel time to the nearest urban hospital is not great. In others, patients may have poorer geographic access, and such communities may be losers in a number of dimensions.

Major teaching and public hospitals may also not fare well in this new environment. Payers will want to limit care at major teaching facilities to treatment not available from other, less costly hospitals. Such care is only a small part of the total output such institutions now provide.[46] Public hospitals will be left out. Both of these types of hospital will be forced increasingly to rely on explicit public subsidies to maintain financial viability.

Physicians and Hospitals: a Changing Balance

The hospital system in the United States is unusual in allowing the vast majority of physicians to remain independent entrepreneurs within hospitals and in granting hospital privileges to virtually all physicians with licenses to practice.[47] Permitting the hospital to be "the doctor's workshop" has both advantages and disadvantages.[48] On the positive side, easy access for physicians has provided continuity of care to patients; in other countries there is typically a referral to a hospital physician who, at least initially, is likely to be unknown to the patient. Furthermore, the ability to grant or deny hospital privileges provides a vehicle for regulating the professional and personal behavior of individual physicians, the only continuous mechanism of peer review.

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46. Frank A. Sloan, J. M. Perrin, and Joseph Valvona, "The Teaching Hospital's Growing Surgical Caseload," *Journal of the American Medical Association*, 1985, 254:376–382.

47. W. A. Glaser, *Health Insurance Bargaining: Foreign Lessons for Americans* (New York: Gardner Press, Inc., 1978).

48. Mark V. Pauly, *Doctors and Their Workshops: Economic Models of Physician Behavior* (Chicago, IL: University of Chicago Press, 1980).

The major disadvantage of this arrangement is that there are two separate authorities within the hospital: the medical staff and the administration.[49] It would appear self-evident that having two "bosses" should lead to intra-organizational conflict and higher cost. However, there is no empirical evidence to support this view. In fact, although experts have recommended implementing formal organizational structures for hospital medical staff to improve both hospital efficiency and quality,[50] empirical investigation of the relationship between hospital organization and cost has not consistently demonstrated that implementing formal structures for medical staff, while maintaining retrospective reimbursement, reduces hospital cost.[51]

Whatever their social benefits, the arrangements between physicians and hospitals that have prevailed during this century have been clearly beneficial to physicians. For one, they have provided far greater professional autonomy than would be likely if the physician were a hospital employee. Also, working in the hospital is highly profitable to the physician because he or she can charge a higher fee per unit of time than in the office,[52] and can substitute hospital inputs for practice inputs, such as nurses, laboratory personnel, and medical supplies.[53]

The Changing Environment

Several developments — some of them discussed by Steven Schroeder and Mitchell Rabkin in their respective articles in this issue — have already begun to affect relationships between physicians and hospitals. First, physician supply is rising steadily, while beds in community hospitals were about as numerous in 1986 as in 1978 (see Fig. 2). As beds are becoming scarcer relative to doctors, doctors are losing bargaining power.

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49. J. E. Harris, "Pricing Rules for Hospitals," *Bell Journal of Economics,* 1979, *10*:224–243.

50. See, for example, M. E. Roemer and J. W. Friedman, *Doctors in Hospitals: Medical Staff Organization and Hospital Performance* (Baltimore, MD: Johns Hopkins Press, 1971).

51. Frank A. Sloan and E. R. Becker, "The Internal Organization of Hospitals and Hospital Costs," *Inquiry,* 1981, *18*:224–239; Mark V. Pauly, "Medical Staff Characteristics and Hospital Costs," *Journal of Human Resources,* 1978, *13*:77–111.

52. I. L. Burney, G. J. Schieber, M. O. Blaxall, and J. R. Gabel, "Medicare and Medicaid Physician Payment Incentives," *Health Care Financing Review,* 1979, *1*:62–78.

53. Pauly, *Doctors and Their Workshops.*

However, this does not mean that physicians will be helpless. Physicians excluded from hospitals will orient themselves to non-hospital activities, such as home health care, and in some cases they will compete directly with hospitals, for example, by opening up freestanding diagnostic facilities. Increasingly, physicians will try to exploit the monopoly power conferred upon them by their ability to refer patients. Physicians who have been denied privileges will also increasingly seek relief through the courts. They will be more likely to resort to litigation both because of the increased difficulty of finding privileges at other hospitals and because legal developments have expanded the use of antitrust theories to privileges cases.[54] In addition, antitrust theories are attractive to potential plaintiffs because they offer the possibility of treble damages plus reasonable fees.

Second, the change in payment procedures has already affected the physician-hospital relationship — and only the beginnings of a major change have been evident to date. Under Medicare's Prospective Payment System, for example, the hospital is penalized if its medical staff discharges patients late, uses substantial numbers of ancillary services, and/or makes excessive demands on hospital employees. Under capitation, the plan is adversely affected to the extent the physician uses hospital resources in the above ways and/or boosts admissions. Autonomous physicians will be less likely to be seen as an "affordable luxury."

Other factors have also contributed to the transition in physician-hospital relationships, but on balance, they are less important than the two just discussed. Changes in tort law, for instance, have substantially increased the hospital's exposure to suits over personal injury.[55] This trend has given hospitals practical reason to be concerned about the quality of their medical staff.

There has also been greater scrutiny by antitrust enforcement agencies of exclusive contracts between hospitals and physician groups. Moreover, there has been an increase in the number of private suits brought by physicians who believe they have been adversely affected by such contracts. On the whole, courts have generally looked favorably upon exclusive contracts between doctors and hospitals so long as it appears that the contract was devel-

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54. C. C. Havighurst, "Doctors and Hospitals: An Antitrust Perspective on Traditional Relationships," *Duke Law Journal,* 1984, pp. 1061–1172.

55. Ibid.

oped in some pro-competitive fashion — such as by arm's-length bargaining or a national search for a doctor group — and there is competition among hospitals in the market area. Such arrangements have been justified in terms of monitoring quality, reducing transaction costs between doctors and hospitals, and assessing availability of physicians' services at the hospital.

The Future

In the future, physicians will undoubtedly have less autonomy in hospitals than they have now. A plethora of young physicians will be available for work on terms that their elder colleagues would have found unacceptable. There is a parallel here, for example, with the young airline pilots who are willing to accept employment at far less pay than their older counterparts who, for various institutional reasons, have been able to collect economic rents.

Relationships between physicians and hospitals will increasingly be formalized in contracts that spell out the rights and obligations of both parties. Formal arrangements will be almost universal in the traditional "hospital-based specialties" (anesthesiology, pathology, radiology, nuclear medicine), as well as in other hospital-oriented specialties which have experienced unusually high growth rates in recent years, such as cardiology and emergency medicine.[56] For all these fields, the hospital's obligation to assure continuous availability of service is especially evident. Contracts involving primary care physicians and hospitals will be relatively rare, but these doctors will increasingly be the "gatekeepers" with the responsibility of both curbing hospital admissions and managing patients' overall care. Surgical specialists will fall somewhere in between "hospital-based" and primary care physicians.

An interesting additional question is whether physicians will become hospital-salaried employees; alternatively, physicians may earn output-based compensation, although on contract with the hospital. It is important to know how the terms of the contract would be established, especially if the latter type of arrangement predominates. Types of output-based contracts between hospital-based physicians and hospitals — often those not based on a search by the hospitals for the best combination of price and quality — are losing credibility among payers. Such arrangements have resulted in

56. B. Steinwald, "Hospital-Based Physicians: Current Issues and Descriptive Evidence," *Health Care Financing Review,* 1980, 2:63–75.

high physician compensation without demonstrable gains in hospital efficiency.[57]

Contract terms in the future may be set by competitive-bidding methods, arm's-length negotiations, or a combination of the two. But there is reason to doubt the general practicality of competitive bidding in the health field.[58] Bidders, for example, in a contest to determine who would provide health care services on a capitation basis, would require substantial information prior to submitting their offers, and, in any event, much gaming is possible. For example, a low bid might be submitted by a seller who reasons that it will later be possible to exclude high-cost patients from the plan. However, it should be practical for hospitals to submit requests for bids from physician groups when the mode of physician compensation is fee-for-service. With periodic re-bidding-contracting, hospitals would have clout over physicians who, having won the contract, turn out to be excessive utilizers. Whether such a scheme would prove to be more efficient than salaried practice cannot be determined without reference to empirical evidence which, unfortunately, is unavailable. More likely, there will be competitive, bilateral negotiation over terms of fee-for-service contracts, as well as salaried employment.

Finally, joint ventures by hospitals and physicians have been described as "the hottest trend in the health care field."[59] Such joint ventures include referral laboratories, computerized axial tomography scanners, magnetic resonance imaging centers, diagnostic centers, ambulatory surgery units, and medical office buildings.[60] One of the alleged advantages of such joint ventures to hospitals is that they are able to lock in a physician referral base. But with the growth of alternative financing arrangements and an expanded physician supply, hospitals will find less reason to engage in such arrangements in the future. In addition, to the extent that non-investor physicians in a market area are excluded from an essential facility, some joint

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57. American Medical Association, *Socioeconomic Characteristics of Medical Practice, 1984* (Chicago, IL: American Medical Association, 1984).

58. Frank A. Sloan and J. W. Hay, "Alternative Medicare Pricing Mechanisms for Physicians' Services," *Medical Care Review,* 1986, *43*:59–100.

59. S. O. Wolff, "Joint Ventures: The Trends and the Potential Pitfalls," *Trustee,* October 1985, p. 13.

60. "Joint Venture Interest Grows," *Medicine and Health,* 1985, *39*:insert; Wolff, "Joint Ventures."

ventures may be anti-competitive. Such arrangements have also been questioned on grounds of conflict of interest.[61]

The Voluntary Hospital: a Re-defined Role

Legal Distinction between For-Profit and Not-for-Profit Organizations

In 1986, only 15 percent of non-federal short-term general "community" hospitals were organized on a for-profit basis; far more — 59 percent — were private not-for-profit, or "voluntary," hospitals. The remaining 26 percent were operated by state and local governments.[62] It is important to note that the voluntaries' hospital share understates their relative importance, since voluntary hospitals tend to be larger than hospitals in the other two ownership categories.

The principal legal distinction between for-profit and not-for-profit organizations is in the distribution of profit. For-profit organizations pay dividends to their owners. In principal, the community, however defined, is the equity-holder or "residual claimant" of the private not-for-profit organization. In practice, while such organizations cannot be formed for individual pecuniary gain, they are free not only to define their "community" as they wish, but also to determine the form in which the community dividend is to be paid.[63] Private not-for-profits enjoy certain state-conferred advantages, such as exemption from corporate income and property taxes, better access to tax-exempt debt financing, and favored treatment under antitrust laws. They are also eligible to receive public and private donations.[64]

Tax-exempt status is no longer being granted to hospitals by communities without questions about hospital mission. In late 1987, Salt Lake County commissioners ruled that four not-for-profit Utah hospitals and two clinics were not providing charitable services to the community and forced them to pay property taxes. In 1985, Utah's Supreme Court had ruled that health care providers no longer would be granted an automatic tax exemption. The matter

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61. Arnold S. Relman, "Dealing with Conflicts of Interest," *New England Journal of Medicine,* 1985, *313*:347–353.

62. American Hospital Association, *Hospital Statistics, 1986 Edition* (Chicago, IL: American Hospital Association, 1987), p. 7.

63. American Hospital Association, *Incorporation, Taxation, and Licensure of Hospitals in the United States* (Chicago, IL: American Hospital Association, 1937).

64. H. B. Hansmann, "The Rationale for Exempting Nonprofit Organizations from Corporate Income Taxation," *Yale Law Journal,* 1981, *91*:54–100.

was put up in a voter referendum in 1986, but the vote supported the Utah Supreme Court's decision.[65]

Why the Not-for-Profit Form Predominates

Several reasons have been advanced for the dominance of the not-for-profit form in the hospital industry. No single explanation is universally accepted or, for that matter, without weaknesses.

Consumer protection constitutes one rationale. Because the consumer possesses far less knowledge of medicine than his or her physician, the latter is presumably well positioned to profit at the expense of the former. Therefore, institutional mechanisms must be established to protect the medical consumer. One such safeguard is the not-for-profit hospital, which presumably does not have profit making as an objective.

Even accepting the premise that patients are often not sufficiently knowledgeable about the health care marketplace, this argument does not alone account for the prevalence of voluntary hospitals. If patients are easily duped, why not organize medical practice on a nonprofit basis and, once the financial incentive has been reduced, have nonprofit medical organizations contract on the patient's behalf with hospitals, whether for-profit or not-for-profit. In fact, under the present fee-for-service system — and considering the relative payment to physicians per hour in hospital versus office settings — physicians as for-profit entrepreneurs have a major financial incentive to take advantage of patients.

A second reason advanced for the dominance of the voluntary hospital is that donors would rather give to a not-for-profit organization than to a profit-making firm. Recipient organizations guided by pecuniary motives may be more likely to appropriate the subsidy for their own use.[66] Until the late 1800s, voluntary hospitals were truly donative institutions. As Charles Rosenberg and David Rothman point out elsewhere in this issue, the poor or persons who lived alone and had no one to care for them went to such hospitals; the non-poor typically received care in physicians' offices or in their own homes, since hospitals provided no service that could not be provided there.[67] Hospitals were seen by the wealthy as a guarantor

65. "Four Utah Hospitals to Pay Taxes," *Medicine and Health,* 1987, *41*:1.

66. H. B. Hansmann, "The Role of Nonprofit Enterprise," *Yale Law Journal,* 1980, *89*:835–901.

67. Paul Starr, *The Social Transformation of American Medicine: The Rise of a Sovereign Profession and the Making of a Vast Industry* (New York: Basic Books,

of social stability. As Morris Vogel noted in his history of Boston hospitals, "In the view of the fortunate classes, hospitals provided the working classes with evidence that the wealthy were aware of their responsibilities."[68] Yet, even in the late nineteenth century not all patients of the Massachusetts General Hospital were poor. In 1880, for example, 19 percent of the hospital's male patients were white-collar workers, compared to 32 percent of all males in Boston the same year.[69]

Three developments since 1900 have greatly reduced the role of voluntary hospitals as donative institutions: (1) improvements in medical procedures and technology, such as antisepsis, anesthesia, and the development of diagnostic tests, which made hospitals safer and more effective places for the non-poor; (2) growth of public hospitals; and (3) proliferation of health insurance plans after the mid-1930s. By the 1950s, voluntary hospitals derived about one-eighth of their revenue from non-patient sources, only a portion of which was from private and public donations.[70] By 1986, non-patient revenue accounted for only 6 percent of the total revenue of voluntary hospitals.[71] Thus, the view that voluntary hospitals were originally formed to receive explicit subsidies is correct, but this rationale has become less important over time. The growing dependence of hospitals on revenue from patients, rather than from non-patient sources, has increased the power of physicians in relation to hospitals.[72]

Of course, not all donations are explicit. Some donations may be provided by donors unwittingly in the form of cross-subsidies. The existence of some insurers — especially since the 1960s — who have been willing to pay almost whatever the hospital charges has created another potential fund for subsidizing worthy causes. Lack-

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1982); Rosemary A. Stevens, " 'A Poor Sort of Memory': Voluntary Hospitals and Government before the Depression," *Milbank Memorial Fund Quarterly/Health and Society,* 1982, *60*:551–584.

68. Morris J. Vogel, *The Invention of the Modern Hospital: Boston 1870–1930* (Chicago, IL: University of Chicago Press, 1980), p. 27.

69. Ibid., p. 11.

70. Thomas Hoerger, Frank A. Sloan, Michael Morrisey, and Mahmud Hassan, "The Demise of Hospital Philanthropy," *Economic Inquiry,* forthcoming 1990; J. H. Hayes, ed., *Financing Hospital Care in the United States, Volume 1: Factors Affecting the Costs of Hospital Care* (New York: The Blakiston Company, Inc., 1954), pp. 42–44, 61–63.

71. American Hospital Association, *Hospital Statistics, 1986 Edition,* p. 204.

72. Charles Perrow, "The Analysis of Goals in Complex Organizations," *American Sociological Review,* 1961, *26*:854–866.

ing stockholders, nonprofit hospitals are probably more inclined to cross-subsidize than are their for-profit counterparts.

Reliance on implicit subsidies as a means for achieving social objectives raises questions in its own right. For one, since hospital administrators and hospital medical staff are not directly accountable to the public, there is at best a weak guarantee (pure trust) that monies received will be allocated in accordance with citizens' preferences. Moreover, with competitive pricing, funds available for cross-subsidies vanish. Therefore, even if the voluntary hospitals' motives are more honorable than those of the proprietaries, they will be increasingly poorly positioned to follow their good intentions.

As both Rosenberg and Rothman have discussed, many voluntary hospitals were initially formed to serve patients of an ethnic or religious minority, not necessarily indigent, or to provide facilities to doctors, such as Jewish doctors, subject to discrimination in securing hospital privileges elsewhere.[73] J. Rogers Hollingsworth and Ellen Jane Hollingsworth, extending Weisbrod's work on nonprofit institutions, hypothesized that when only a minority of the population desires specific types of collective goods, such as hospitals, parks, and schools, and are willing to pay for them, private rather than public organizations are often formed to provide these services.[74] For this reason, nonprofit organizations are more likely to develop in heterogeneous than in homogeneous societies. As demand for services grows, the voluntary organizations can no longer satisfy demand, which in turn leads to some form of public financing. Although Hollingsworth and Hollingsworth applied their framework to British hospitals before World War II, the same forces were obviously once at work in the United States. The names of many American hospitals — such as Swedish-American Hospital, in Rockford, Illinois, and Jewish Hospital, in Louisville, Kentucky — if not the motives for their formation, remain.

A somewhat more cynical view of the rationale for voluntary hospitals holds that such hospitals are operated to serve the interests

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73. Starr, *The Social Transformation of American Medicine*, pp. 173–174.

74. J. Rogers Hollingsworth and Ellen J. Hollingsworth, *Voluntary and Public Hospitals in England and Wales*, Yale University ISPS Working Paper No. 2075, November 1983; B. A. Weisbrod, *The Voluntary Nonprofit Sector* (Lexington, MA: D. C. Heath and Co., 1977).

of a local physician cartel.[75] Although this notion is not consistent with some of these hospitals' origins as almshouses, it may explain in part why voluntary hospitals have continued to exist. Further, certain institutional arrangements, such as closed medical staffing and barriers to hospital entry, which state certificate-of-need programs establish, clearly smack of such cartelization.

To link cartelization to the dominance of the not-for-profit hospital, one must explain why doctors' cartels select this form rather than a proprietary organization for the hospital. Robert Clark has suggested several reasons.[76] First, it may be easier for physician cartel members to split the profit from a nonprofit organization. With the for-profit form, doctors have to share profit with shareholders. Doctors prefer to split profit in terms of business brought to the hospital rather than on the basis of stockholder investment, which the for-profit form would require. Second, doctors can benefit from tax advantages available to voluntary hospitals. In for-profit enterprises, at least a part of taxes are borne by stockholders in terms of reduced dividends and capital gains. In a nonprofit setting, the medical staff may be in a position to appropriate the tax savings for their own purposes, such as to buy medical equipment that otherwise would not be purchased if the decision were fully guided by the hospital's interest. Third, the local doctor cartel can more readily assert control over a nonprofit organization than over a hospital owned and operated by a large corporation. There is unquestionably some truth to this third argument. Potential loss of local physician autonomy is at the root of widespread concern in the medical community about the rapid growth of investor-owned hospital chains. These worries are often expressed with appeals to lofty ideals, such as concern for the poor and for the future state of biomedical science and research.

With the possible exception of the consumer protection argument, all of the above reasons for the dominance of the voluntary sector have merit, at least through the 1980s. Yet it is doubtful that most of these arguments apply to the 1990s and beyond. Private philanthropy accounts for no more than 2 percent of operating income of voluntary hospitals and provides about 5 percent of

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75. Mark V. Pauly and M. Redisch, "The Not-for-Profit Hospital as a Physician's Cooperative," *American Economic Review,* 1973, *63*:87–100; S. S. Shalit, "A Doctor-Hospital Cartel Theory," *Journal of Business,* 1977, *50*:1–19.

76. R. C. Clark, "Does the Nonprofit Form Fit the Hospital Industry?" *Harvard Law Review,* 1980, *93*:1416–1489.

funds for hospital construction.[77] As these nonprofit organizations become more "corporate-like" and possible changes in federal tax laws make private giving less attractive to donors, these percentages are bound to diminish further. Government grants for construction are now virtually nonexistent, and public subsidies of operating expense are largely given in return for hospital provision of uncompensated care.[78] Thus, there is no money to be made on such operating subsidies and the justification of the voluntary hospital as the recipient of explicit subsidies in the 1970s and 1980s is no longer as valid as it once was.

In addition, physician discrimination of the type that prevailed before World War II is now relatively rare. Competitive pricing will eliminate funds for implicit subsidies and, with the expanded physician supply and the growth of alternative delivery systems, physician cartels, to the extent they ever existed, will be difficult to maintain.

Is the Not-for-Profit Hospital a Dying Institution?

Does this mean that the voluntary hospital is a concept whose time has come and gone? Probably not — and for several reasons.

Relative Cost. First, several studies have compared the relative cost of care provided by for-profit and not-for-profit hospitals. The "bottom line" from this research is that voluntaries are no more costly than their proprietary counterparts and, therefore, voluntary hospitals should be able to compete in the future. These studies were based on data collected before Medicare's Prospective Payment System was implemented and before the recent increase in enrollments in HMO and PPO plans, which have given voluntaries incentives to improve efficiency. Unless new payment practices stimulate relative efficiency-enhancing actions on the part of for-profit hospitals, there is no reason from the standpoint of operating efficiency for voluntary hospitals to fail. In fact, it was the enactment of Medicare and Medicaid in the mid-1960s, with their associated capital payment policies, that provided a stimulus for the formation of hospital companies. These companies did not come into existence as a response to the cost containment policies of the 1980s.

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77. R. Mullner, D. Matthews, J. D. Kubal, and S. Andes, "Debt Financing: An Alternative for Hospital Construction Funding," *Healthcare Financial Management*, 1983, *13*:18–24.

78. Ibid.

A very brief summary will suffice here to illustrate research methods and findings from these studies of comparative operating performance. Much more detailed reviews may be found elsewhere.[79]

Lawrence Lewin, Robert Derzon and Rhea Margulies compared 53 matched pairs of for-profit and voluntary hospitals.[80] Each for-profit hospital had been owned by a chain for at least three years. The authors found for-profits had higher operating cost per adjusted patient day, but inpatient cost per admission was about equal, since stays were shorter in proprietary hospitals. The for-profit hospitals had higher markups over cost, with the result that their charges, irrespective of the documentation used, were higher.

Using the financial data that Florida hospitals are required to submit to that state's Hospital Cost Containment Board, Frank Sloan and Robert Vraciu compared proprietary and voluntary hospitals with less than four hundred beds.[81] To gauge efficiency, the authors developed two measures: "net operating funds," defined as operating revenue (net of contractual and non-paid accounts) minus corporate income taxes, and "total margin," the after-tax difference between total revenue, including nonoperating revenue, and total expenses. No difference was found on net operating funds per adjusted admission, and total margin was slightly higher for the voluntaries.

Robert V. Pattison and Hallie Katz assessed 1980 financial data for voluntary and proprietary hospitals in California from reports submitted to the California Health Facilities Commission.[82] To achieve homogeneity in scope of services, the authors classified each hospital in 1 of 12 "peer groups." Empirical results were presented on Peer Groups four and five. Both groups had relatively high for-profit representation and mean bedsize was one hundred and forty. The investor-owned chains were about 2 percent higher in terms of

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79. Institute of Medicine, *For-Profit Enterprise in Health Care* (Washington, DC: National Academy Press, National Academy of Sciences, 1986); Frank A. Sloan, "Property Rights in the Hospital Industry," in H. E. Frech III, ed., *Health Care in America: The Political Economy of Hospitals and Health Insurance* (San Francisco: Pacific Research Institute for Public Policy, 1988).

80. Lawrence S. Lewin, Robert A. Derzon, and Rhea Margulies, "Investor-Owneds and Nonprofits Differ in Economic Performance," *Hospitals,* 1981, *55*:52–58.

81. Frank A. Sloan and Robert A. Vraciu, "Investor-Owned and Not-for-Profit Hospitals: Addressing Some Issues," *Health Affairs,* 1983, *2*:25–37.

82. Robert V. Pattison and Hallie M. Katz, "Investor-Owned and Not-for-Profit Hospitals," *New England Journal of Medicine,* 1983, *309*:347–353.

operating expense per admission than the voluntary hospitals. There was no consistency among hospital types in relative after-tax profitability. On net income per tax per case, a measure which included nonoperating revenue, voluntary hospitals ranked higher.

Edmund Becker and Frank Sloan combined 1979 data from two national hospital surveys — the Reimbursement Survey and the Annual Survey of Hospitals — conducted by the American Hospital Association.[83] Combining the two surveys made 1,645 hospitals available for analysis. The authors distinguished among hospital types on the basis of ownership, membership in a multi-hospital system, and length of affiliation with a system. Holding other factors constant by means of a regression analysis, the authors found newly affiliated proprietary chain hospitals to be 6 percent higher than independent voluntaries on a cost per case basis. After adjusting for several factors, including the tax advantages accruing to the voluntaries, the difference fell to 2 percent. Once other explanatory variables were added to the regression, no difference in the profitability of the two types of hospitals was detected.

Using data from 1980 Medicare Cost Reports, Steven C. Renn and several colleagues compared performance among a national sample of 561 hospitals.[84] The authors distinguished among five types of hospitals based on ownership and system affiliation status. Like Becker and Sloan, they used regression analysis to hold other factors, such as case mix, constant. No significant differences among any of the five hospital types in total expense per adjusted admission were detected; home office cost was relatively high, however, in investor-owned chain hospitals, but this item was an element of total expense. Among the for-profits, net patient revenue (net of contractual allowances and other discounts) per adjusted admission was 9 percent higher than for independent voluntaries and 12 percent higher than for voluntary hospitals belonging to multi-hospital systems.

Regina A. Herzlinger and William S. Krasker compared the performance of 14 major hospital chains, six of which were for-

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83. Edmund R. Becker and Frank A. Sloan, "Hospital Ownership and Performance," *Economic Inquiry*, 1985, 23:21–36.

84. Steven C. Renn, C. J. Schramm, J. M. Watt, and Robert A. Derzon, "The Effects of Ownership and System Affiliation on the Economic Performance of Hospitals," *Inquiry*, 1985, 22:219–236.

profit and eight not-for-profit, for the years 1977 and 1981.[85] In one regression, they found no difference in patient charges between the two hospital types; with a slightly different specification, they found for-profit charges to be lower. Operating costs were slightly lower for the for-profits and their hospital staffing was leaner. There was no difference between the two types of hospitals in terms of the insurance coverage of their patients. Based on their empirical results, the authors concluded that at the very least, nonprofit hospitals do not inevitably improve social welfare in their communities.[86]

This highly publicized study has been criticized.[87] The criticism (such as the unrepresentative sample) would carry more weight if this were the only study on the subject. But it is not, and the pattern from these studies is remarkably similar: there was virtually no difference between voluntary and proprietary hospitals in cost per case, but the proprietary hospitals, especially those affiliated with systems, often showed higher cost per day.

Comparing markups involves several complex analytical issues. For one, to achieve comparability there should be adjustment for tax differences, as well as for availability of funds from nonpatient sources. For-profits have to obtain payment for equity cost almost exclusively from patient sources; voluntaries can receive donations from public and private sources. Such adjustments, when applied, narrow the differentials but do not eliminate them entirely. Also, private not-for-profit hospitals may be underpricing their services and, therefore, not covering their full cost of equity.[88]

Access to Capital. While voluntary hospitals may be at least the equal of their for-profit competitors on the operating side, there is a widespread perception that the for-profit chains will eventually win a substantial market share or even market dominance because of their superior access to capital.[89] Here, there is much less information available in terms of concrete research findings, but nevertheless, the case for ultimate dominance by the for-profits is far from clear. The competitive advantage of the hospital companies rests, presumably, in their ability to issue equity, not in issuing debt.

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85. Regina A. Herzlinger and William S. Krasker, "Who Profits from Nonprofits?" *Harvard Business Review,* 1987, *65*:93–106.

86. Ibid.

87. See, for example, Uwe E. Reinhardt, "Flawed Methods Cripple Study on Not-for-Profits," *Hospitals,* 1987, *61*:136.

88. Lewin, Derzon, and Margulies, "Investor-Owneds and Nonprofits Differ in Economic Performance."

89. Ermann and Gabel, "Multihospital Systems."

In most years, sales of stock have accounted for far less than half of the change in equity of hospital companies. Debt and internal equity financing were far more important funding sources.[90] On average, for-profit hospitals pay higher interest on debt than voluntaries pay; yet their mean debt-to-equity ratio far exceeds that of nonprofits.[91] In fact, hospital companies are far more highly leveraged than are most American industrial firms.[92] High debt-to-equity ratios may expose some companies to substantial risk as prospective payment is substituted for retrospective payment.

For proprietary organizations, the opportunity cost of investing in a hospital in a particular locality is the missed chance not to invest in something else that may be equally or more profitable. Obviously, the investor is not limited to the hospital industry. If prospective returns in the fast-food fried-chicken business rise relative to those in the hospital sector, for example, investors will reallocate their funds to chickens.

Furthermore, if investing in two hospitals in Tampa is more profitable than investing in one hospital in Tampa and another in a small town in upstate New York, a hospital company has an obligation to the owners of its equity to make the more profitable investment. Thus, left with total reliance on hospital companies, the citizens of this hypothetical New York community may be unserved by hospitals unless prices for hospital services can be set in such a way as to make care in that community competitive (from the investors' point of view) with the profitability of hospital care elsewhere and with other products.

The voluntary hospital is not under the same obligation to shareholders. As a result, such hospitals may be located in communities that are undesirable to the proprietaries. The town fathers of the upstate New York village may compare the marginal benefit of hospital care with that of other local public services, but they are unlikely to consider investing in a Tampa hospital or in Peoria Fried Chicken within their "opportunity set." For this reason, there is likely to be a voluntary hospital for some time to come.

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90. Joseph Valvona and Frank A. Sloan, "Hospital Profitability and Capital Structure: A Comparative Analysis," *Health Services Research*, 1988, *23*:343–357.

91. Frank A. Sloan, Michael A. Morrisey, and Joseph Valvona, "Capital Markets and the Growth of Multihospital Systems," in Lewis Rossiter and Richard Scheffler, eds., *Advances in Health Economics and Health Services*, Vol. 7, (Greenwich, CT: JAI Press, 1987), pp. 83–109.

92. Valvona and Sloan, "Hospital Profitability and Capital Structure."

Investors will not be willing to supply capital in areas in which the *ex ante* return is insufficient. Recent empirical research has shown that the proprietary hospital share is comparatively low in states in which investments in hospitals yield a poor return.[93] Capital will have to come from another source, namely public and private donations. Voluntary hospitals are permitted to receive capital in this form.

There has been a limited amount of direct collaboration between chain for-profits and university-affiliated teaching and research hospitals in the 1980s. By 1986, investor-owned chains controlled six major teaching hospitals, and several other teaching hospitals were entertaining bids. In addition, several other teaching hospitals were engaged in joint ventures with one of the chains.[94] Some observers based in teaching hospitals have seen some good in this trend. For example, according to Francis D. Moore:

> Rather than bemoan this trend, I would loudly cheer it. If the IOFP (investor-owned for-profit) chains can help underwrite the expensive care dished up by American university-affiliated hospitals through cross-subsidization from hospitals thousands of miles away, what could be better? I enjoy contemplating the possibility that profits from an oil-rich OPEC nation might support the sick poor of Louisville or Miami, or the teaching of American residents. Imagine paying for a genetics lab with petrodollars![95]

Quotations such as this represent wishful thinking. Investments in major teaching hospitals by profit-seeking companies can only be justified if the financial return (which includes an estimated value of the effect of a prestigious acquisition on long-run earnings) exceeds the cost. Few hospitals are likely to satisfy this criterion.[96] What, for instance, is the reputational benefit to a hospital company of the fourth major teaching hospital? Without explicit public subsidies of money-losing activities of major teaching institutions, the acquisition of such hospitals by hospital companies will soon be a strategy whose time has (briefly) come and gone. The voluntary

93. G. J. Wedig, Mahmud Hassan, and Frank A. Sloan, "Hospital Investment Decisions and the Cost of Capital," *Journal of Business*, 1989, *62*:517–536.

94. J. Feder and J. Hadley, "A Threat or a Promise?: Acquisition of Teaching Hospitals by Investor-Owned Chains," *Journal of Health Politics, Policy and Law*, 1987, *12*:325–342.

95. Francis D. Moore, "Who Should Profit from the Care of Your Illness?" *Harvard Magazine*, 1985, *88*:52.

96. Feder and Hadley, "A Threat or a Promise?"

and public sectors will be left with the problems of both medical education and financing basic biomedical research.

The vast majority of voluntary hospitals are no longer charitable institutions. In 1982, mean bad debt (care provided for which payment is anticipated but not received) and charity care (care provided for which no payment is anticipated) as a percent of charges for voluntary and for-profit hospitals were about the same.[97] It is difficult to blame competition from the for-profits for the voluntaries' percentage because the for-profit hospital market share in many states is negligible or even zero. Rather, other forces, such as increased competition among hospitals and increased cost-containment pressures from third-party payers for hospital care, are responsible for the change in voluntary hospital orientation. As these forces squeeze the "fat" out of the hospital system, cross-subsidies for the care of the poor will necessarily be eliminated as well. With some important exceptions — in particular, major teaching hospitals — the voluntary hospital is dead as a charitable institution. It will be up to the policy process to devise and implement mechanisms for providing explicit public subsidies for hospital patients with no other available source of payment.

Conclusion

One's crystal ball is understandably greatly influenced by events in the recent past. The 1980s saw large-scale changes in hospital financing which in turn are having substantial effects on the hospital delivery system. If the recently implemented financing changes do not result in meaningful cost containment and increased access to hospital care, and if health care services in general continue to deteriorate, rather than continue to rely on competition, pressure will build for universal health insurance with reliance on regulatory controls far more stringent than have been introduced on a widespread basis to date.[98] Specific effects on the hospital industry would depend on how the financing-regulatory program would be structured. There are numerous alternatives and hence numerous poten-

97. Frank A. Sloan, Joseph Valvona, and R. Mullner, "Identifying the Issues: A Statistical Profile," in Frank A. Sloan, J. F. Blumstein, and J. M. Perrin, eds., *Uncompensated Hospital Care: Rights and Responsibilities* (Baltimore, MD: Johns Hopkins University Press, 1986), pp. 16–53.

98. For empirical evidence on access trends, see H. E. Freeman, R. J. Blendon, L. H. Aiken, S. Sudman, C. F. Mullinix, and C. R. Corey, "Americans Report on Their Access to Health Care," *Health Affairs*, 1987, 6:1–18.

tial effects. In part, choice of alternatives in the 1990s will depend on the experience with new financing schemes accumulated during the 1980s. One can say with certainty only that the future of the hospital system will be determined more by financing than any other factor, such as physician supply growth, scientific breakthroughs leading to technological changes in the hospital sector, changes in tax policy affecting not-for-profit institutions, or antitrust policy as it applies to hospitals.

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Hospitals and the Public Purse

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Introduction

The modern American hospital and the American system of health insurance grew up together. For 50 years, development of the nation's hospitals was fueled by a growing system of health insurance, both private and public. That development increased both the desirability and the costs of hospital services, which, in turn, reinforced the demand for health insurance, and, until recently, stimulated the extension of insurance to an ever-growing share of the population. As a result, hospitals and insurers fed symbiotically on each other, the growth of one supporting the growth of the other. Two sharply angled, parallel lines marched from lower left to upper right in the charting of health care in national expenditure accounts; at times, one line or the other briefly rose higher, but the growth rate of the other always caught up (See Fig. 1).

This long-standing, self-reinforcing cycle of growth in hospital expenditures and health insurance has begun to come to an end. The system of health insurance that prevailed, uniquely, in the United States for two generations is under the most serious attack in its history, and may well not survive. As health insurers, public and private — and their customers — respond to these attacks by changing behavior in order to adapt to new perceptions of reality, they have been attempting radically to alter the relationship between insurance and hospitals. As strongly as any other factor, the course of those insurers' efforts, and the hospitals' eventual response to them, will shape the future of hospitals and medical care in the United States.

New types of health insurance for those with insurance, combined with a shrinkage in the portion of the population that is insured at all, have already begun to undermine the way in which hospital services are financed in this country. The future shape of such financing is far from clear, in part because hospitals have only just begun to react to new short-term pressures, without the emergence of coherent, plausible long-term strategies. If new methods for financing hospital services are to be developed, they are

Transactions & Studies of the College of Physicians of Philadelphia Ser. 5, Vol. 12, No. 2 (1990); 263-294
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Year	Total ($ Billions)	Direct Payments	Private Insurance	Total Government[a]	Medicaid	Medicare
1965	$ 14.0	16.8%	41.1%	39.9%	N.A.	N.A.
1970	28.0	11.4	34.6	52.4	8.0%	18.2%
1975	52.4	7.9	35.9	55.1	9.1	21.9
1980	101.6	7.8	38.1	53.1	9.4	25.5
1983	146.8	9.0	37.4	52.3	8.8	27.6
1984	156.1	9.0	36.2	53.7	8.9	28.5
1985	166.7	9.2	35.3	54.3	9.0	28.9
1986	178.4	9.4	36.1	53.4	8.9	28.2
1987	194.7	9.5	36.9	52.5	9.1	27.4

N.A.= Not Applicable.

[a] Includes other government expenditures such as Veterans Administration and state and local expenditures on public health.

Figure 1. Hospital care expenditures and percent distribution by source of funds: United States, 1965–1987.
Courtesy of the United States Department of Health and Human Services, Public Health Service.

most likely to emerge, as they have in the past, from the hospital sector itself, but that does not yet appear to have begun to happen.

The basic thesis of this paper is that, in order for hospitals to continue to provide essential inpatient medical services for those who cannot or will not be served elsewhere — in order, in short, for hospitals as we now define them to survive — they will need to accept, or perhaps create, a rupture between health insurance of the population on the one hand and hospital revenue on the other. In fact, that break is likely to occur whether hospitals encourage it or not. Ironically, seeking ways to finance hospital services outside the system of health insurance may also constitute a re-invention of patterns of financing that prevailed in earlier periods of American history, before the invention, by hospitals, of Blue Cross and the developments that followed that event.

Exploring this thesis requires, first, a relatively brief and necessarily rather summary review of some of the history of American hospitals and, especially, American hospital finance in the United States. A more detailed examination of recent events then follows, in order to provide an analytic framework for considering the future of hospital finance in American society.

The Emergence of the Modern Hospital

A group of distinguished scholars have documented the development of the modern American hospital in the period extending roughly from the last decade of the nineteenth century through the onset of the Great Depression.[1] Before the transformation began, hospitals were primarily providers of indoor relief for the indigent or socially displaced. Illness of some sort was generally, if not invariably, a precondition for admission, but since there was not very much in the way of therapeutic services hospitals could provide, those ill people who could comfortably remain at home tended to do so.

Culturally, hospitals were supported by two very different, if not incompatible, sets of impulses. In the private sector, traditions of charity, especially those tied to religious orders and other church-related activities, were further reinforced with Florence Nightingale's invention of a formal rationale for nursing activities, which helped strengthen the caregiving role women had traditionally occupied in religious communities. In the public sector, the perennial problem of where to put those who had nowhere else to go was exacerbated by the growth of an urban, industrial society with its social dislocation leaving masses of working people without family supports.[2]

These impulses implied their own financing arrangements. In the private sector, philanthropy took the form not only of cash contributions, but perhaps more importantly of volunteer or quasi-volunteer caretaking. In the public sector, hospitals were operated directly as public institutions, or supported by subsidies to private providers. In neither case were the cash sums involved particularly consequential.

Of the forces that transformed the hospital over the past 50 years or so, the use of technology was probably the most important. The disciplines of radiology, bacteriology, and anesthesiology all had their scientific origins in the latter part of the nineteenth century, establishing, in effect, the underpinnings for the core services of the

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1. Charles E. Rosenberg, *The Care of Strangers: The Rise of America's Hospital System* (New York: Basic Books, 1987); David Rosner, *A Once Charitable Enterprise: Hospitals and Health Care in Brooklyn and New York, 1885–1915* (New York: Cambridge University Press, 1982); Rosemary A. Stevens, *In Sickness and in Wealth: American Hospitals in the Twentieth Century* (New York: Basic Books, 1989).

2. Rosner, *A Once Charitable Enterprise,* Chapter One.

modern hospital. The technologies that emerged from this expanding scientific base often required complex and expensive equipment; conversely, they enhanced the capacity of those who employed the equipment to provide prognostic, and sometimes therapeutic, assistance to hospital patients.

These scientific developments also provided the impetus for the reform of medical education most commonly associated with the work of the Flexner Commission,[3] and the concomitant reorganization of a much shrunken medical profession along putatively scientific lines. The new model of medical education was heavily dependent on the hospital, not only as the traditional source of indigent teaching material, but also as the site for scientifically advanced diagnostic and therapeutic interventions. Trained in the hospital, physicians increasingly turned to them as the site for caring for their private patients.

As hospitals underwent this transformation, they also proliferated. In the cities, growing ethnic heterogeneity produced by succeeding waves of immigration was associated with the creation of hospitals "belonging" to each ethnic or religious group. In the bigger cities, German and Scandinavian Lutherans each had their own hospitals, as did Irish and Italian Catholics. In rural areas, hospital proliferation in the first two decades of the twentieth century was encouraged by a group of foundations, based in big cities, that sought to improve rural life by improving rural medical services and particularly by encouraging the construction of hospitals in order to attract physicians to isolated communities.[4]

The development of new technologies and the proliferation of new hospitals strained the financial base that had supported hospital care and generated a search for new sources of revenue. For a time, fees from private patients were the most important source. Hospitals proliferated and expanded, in part, because they could do more for patients and because physicians increasingly wanted to treat patients in them; these considerations in turn generated demand among potential customers capable of paying for the services they received. Increased revenues, of course, permitted hospitals to

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3. The Flexner Commission, led by Abraham Flexner of the Johns Hopkins University, conducted a study of American and Canadian medical schools in 1910. Its critique of the quality of medical education led to the closure of many medical schools and resulted in the formulation of new medical school curriculum and procedures for training physicians; Stevens, *In Sickness and in Wealth,* pp. 57–62.

4. Stevens, *In Sickness and in Wealth,* pp. 124–125.

invest still further in new technologies and new facilities; these investments in turn required them to seek still more revenues.

As hospitals became increasingly dependent on private patients, they became increasingly dependent on private physicians as well. Admission of indigent patients had been only partly a professional issue, and in many institutions it was initially a function reserved for the board of trustees. Private patients, almost by definition, "belonged" first to their doctors. Only attending physicians could supply the hospital with private patients and the revenue they brought with them. Attracting medical staff, in a shrinking physician market, thus became still further impetus for hospitals to invest in plant and equipment.

The Invention of Blue Cross

The capacity of private patient revenues to finance an ever-expanding hospital economy, limited to begin with, was destroyed along with so much else by the Great Depression of the 1930s. There were not enough people left with enough money to pay for all that hospital service. Further, as a result of economic circumstances, more traditional methods of financing hospital care, philanthropy and public subsidy, were also less available. Some new method of raising the funds to pay for hospitals had to be developed.

The method, of course, was Blue Cross. Created, for the most part, by hospitals, Blue Cross plans used the actuarial principles of insurance to spread risk among a broad enough part of the population to make hospitalization affordable. At the same time, by insuring for-service benefits — days of hospital use — rather than indemnity benefits, Blue Cross tied the insured population to the hospital.

Historians have tended to view the development of health insurance within the broader context of social insurance, and it has frequently been observed that, before and after World War II, when the industrialized nations of Europe were adopting national health insurance, the United States took a characteristically different course by developing a system of private, employment-based health insurance coverage.[5] It is also true that health insurance was the one piece of the package self-consciously omitted from the Advisory Committee on Social Security's carefully orchestrated recommenda-

5. For an overview, see Sylvia A. Law, *Blue Cross: What Went Wrong?* (New Haven: Yale University Press, 1974).

tions to President Franklin D. Roosevelt in 1935, presumably from fear that opposition of the organized medical community would endanger the entire package.[6]

Ever since, efforts to expand publicly financed health insurance have taken place within the boundaries of the Social Security Act, and, indeed, the development of Medicare and Medicaid in the mid-1960s was largely spearheaded by alumni of the early days of Social Security, including Wilbur Cohen, Robert M. Ball, and Irving Wolkstein.[7]

Unique to Blue Cross was its single-minded focus on hospital care, at a time when social insurance advocates in most of the western world still defined health insurance primarily as a problem of income replacement for workers unable to participate in the labor force because of illness. Blue Cross constituted a mechanism through which hospitals could tap into a base of broad support from the employed middle class without resorting, through taxation, to increased dependence on governments. A new stream of financing was added to the traditional sources of government and philanthropy, a stream that, further, was controlled to a considerable degree by the hospitals themselves.

If the development of Blue Cross provided the basis for ensuring that a growing number of middle-class patients would be accompanied by a reliable source of financing, the conversion of hospitals into institutions for the middle class also required new sources of capital. The great urban teaching hospitals constructed in the 1920s, whose private pavilions had entrances separate from the wards that still admitted the great majority of patients, were in fact the last of their kind. Columbia-Presbyterian, in New York City, Northwestern, in Chicago, and University Hospitals, in Cleveland, were financed almost exclusively by private philanthropy. The continued influx of middle-class patients into the hospital system, driven by and combined with the continued flourishing of technology, generated a demand for capital investment in the hospital system that philanthropic resources were simply unable to meet.

The federal government sealed the transformation of hospitals from particularistic institutions for the poor or specific ethnic

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6. Robert B. Stevens, ed., *Statutory History of the United States: Income Security* (New York: Chelsea House Publishers, 1970), pp. 275–280.

7. For a discussion of the role of Cohen and his generation in the development of Medicaid and Medicare, see Theodore R. Marmor, *The Politics of Medicare* (New York: Aldine de Gruyter, 1973).

groups to universalistic, community institutions with the adoption of the Hospital Survey and Construction Act — the Hill-Burton Act — in 1946.[8] Hill-Burton was sold to a skeptical Congress as an essential health services program that would bring needed facilities, followed, if necessary, by physicians, to inadequately served communities. Given a political climate that still had not acknowledged a role for the federal government in personal health services for anyone other than government dependents, shoehorning a hospital construction subsidy into a public health box was perhaps an ideological necessity, but the implicit logic of the argument was important. Hospitals were an important *community* resource that should be broadly available. Like highways, they needed to be planned for at the state level, according to construction and safety standards established by the federal government. And, as with highways, the greater fiscal capacity of the federal government and the need to reduce inequities across communities resulting from the varying economic capacity of different parts of the country justified a system of federal subsidies, to be matched by funds raised at the state or local level.

Like federal highway programs, Hill-Burton, in the 30 years of its existence, evolved from a relatively small, targeted subsidy program into an almost classic pork barrel, with benefits distributed to every Congressional district in the nation, and with the range of eligible projects continually expanded. For the purposes at hand, however, three aspects of Hill-Burton are the most important. First, again, Hill-Burton solidified in federal policy the character of the "modern" hospital as the central component in a health care system to serve the middle class. Second, and not inconsequentially, Hill-Burton helped provide an adequate supply of inpatient facilities for beneficiaries of the expanded health insurance coverage provided to the employed population after World War II. Spurred on, first, by the encouragement of the War Labor Board during the war, then by pacesetting contracts negotiated after the war by autoworkers, steelworkers, and other big unions of the Congress of Industrial Organizations, and finally by the regulatory structure for fringe benefits and multi-employer plans created by the Taft-Hartley Act in 1948, private health insurance as a fringe benefit of employment

8. P.L. 79–7; Stevens, *In Sickness and in Wealth*, pp. 216–219.

became almost universal.[9] Moreover, as private insurance companies entered this increasingly lucrative market in competition with Blue Cross, the Blue Cross insurance model, with its emphasis on extensive coverage of inpatient hospitalization and less generous benefits for physician and outpatient services, remained dominant. The boom in facilities construction initiated by Hill-Burton made maintenance of that model plausible.

Third, but not least, Hill-Burton obviously opened up entirely new sources of capital for community hospitals, not only in the form of direct federal subsidies, but also from local lending sources and national debt markets. Direct grants-in-aid provided only a fraction of the assistance made available by Hill-Burton; more dollars were provided in loans and loan guarantees. Philanthropy and local governments were no longer the only available sources for construction funds. Growing private insurance provided hospitals with presumably reliable revenue streams, against which they could borrow construction funds. At first, wary lenders getting accustomed to the idea were reassured by federal guarantees; over time, as experience grew and the revenue streams increased, the guarantees became, in many cases, unnecessary.

Again, in emphasizing the contributions of insurance and capital subsidies to the flourishing of American hospitals after World War II, it is important not to overlook the contributions of science and technology. The era of Hill-Burton and the universalization of private, employment-based health insurance was also the era of the National Institutes of Health and the explosion of modern biomedical science. Ironically, perhaps, the two greatest of the early accomplishments of this explosion substantially reduced the need for inpatient hospital care. The development of pharmacological treatments for tuberculosis in the 1940s all but eliminated the single largest cause of inpatient hospital days, and, indeed, eventually rendered obsolete a whole class of hospitals. Figure 2 shows the dramatic decline in tuberculosis beds after 1946. Similarly, the development of the Salk vaccine for poliomyelitis in the mid-1950s all but eliminated a major cause of pediatric hospitalization.

At the same time, developments in pharmacology, cardiology, surgical technologies, and the like were enabling hospitals to treat all sorts of cases they had been unable to treat in the past. Indeed,

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9. Raymond Munts, *Bargaining for Health: Labor Unions, Health Insurance, and Medical Care* (Wisconsin: University of Wisconsin Press, 1967).

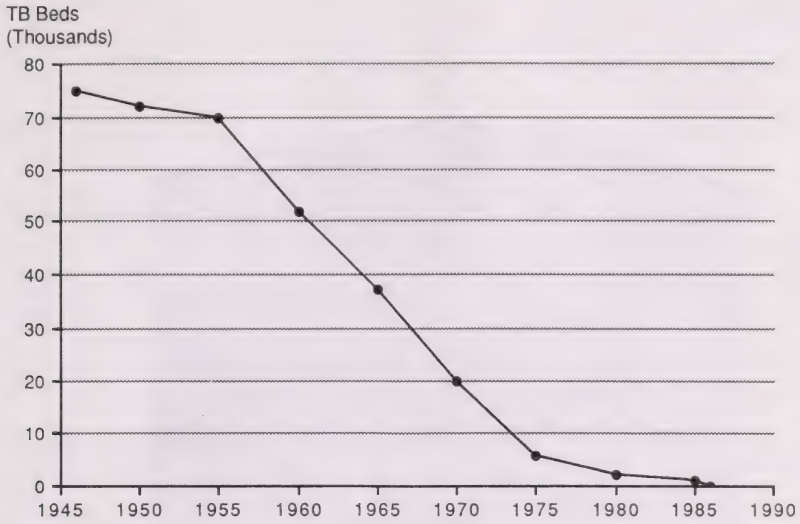

Figure 2. Decline in tuberculosis beds in non-federal tuberculosis and other respiratory hospitals: United States, 1946– 1986.
Courtesy of American Hospital Association.

the contrast between the reduction in chronic utilization for tuberculosis and the development of new interventions for infectious diseases, oncologies, trauma, and coronary disease reflects a much broader pattern that has characterized hospitals throughout the past 50 years. As technologies evolved, admissions increased (See Fig. 3), but lengths of stay shortened (See Fig. 4). Service intensity per day grew dramatically, as did the proportion of all admissions which involved a surgical procedure (See Fig. 3). Ancillary diagnostic and therapeutic services came to account for a larger and larger proportion of total hospital expense. And expenses began to rise at a rate significantly higher than input inflation, as hospitals added equipment, facilities, and personnel to support their new capabilities.

As increased insurance coverage for the working population supported these developments, it also intersected with technological changes to narrow the scope of what general hospitals were supposed to do. Palliative and convalescent services for patients with intractable illnesses came to be defined as outside the jurisdiction of the general hospital. These services did not fit with the increased

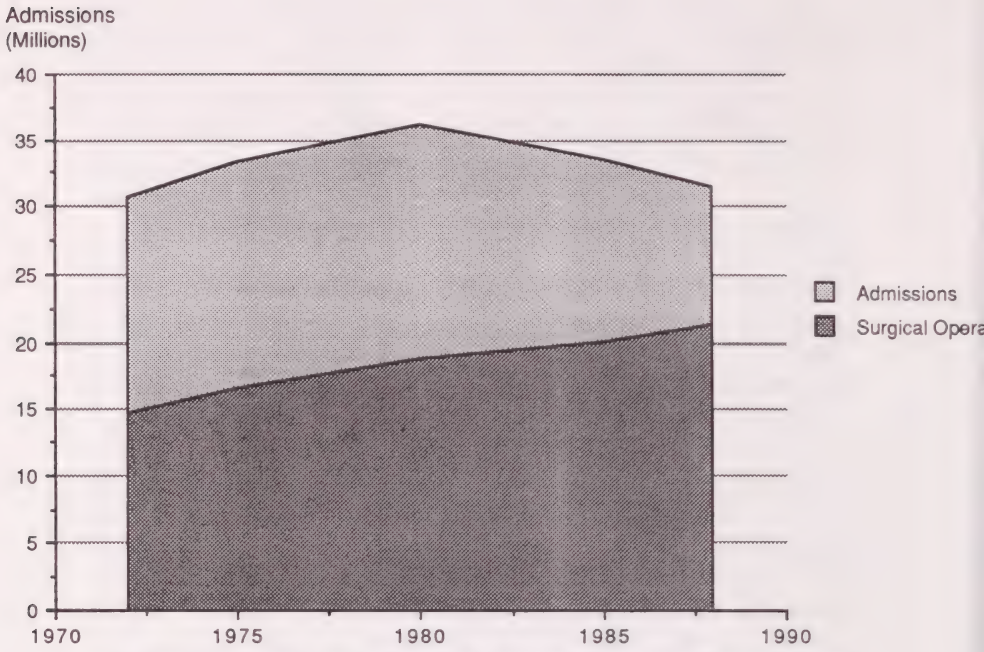

Figure 3. Hospital admissions and surgical operations: United States, 1972–1988.
Courtesy of American Hospital Association.

interventionist capacities through which hospitals defined themselves, because they were of less interest to a new generation of curatively oriented physicians, and not least because they were generally not covered by private insurance — either because of limitations in the insurance policies themselves or because those with chronic illnesses were less likely to be insured. From its inception, Blue Cross excluded psychiatric services and custodial care in order to prevent state governments, which had long been responsible for those services, from transferring the costs to private insurance, and, for insurance purposes, its service benefits were always tied to episodic illnesses. Nor was it always adequately recognized that development of a health insurance system around employment benefits provides limited help to those who are not employable, or become unemployable, by reason of chronic illness.

In passing, it might be noted in this connection that the recognition of the nursing home as a distinct sort of health care institution

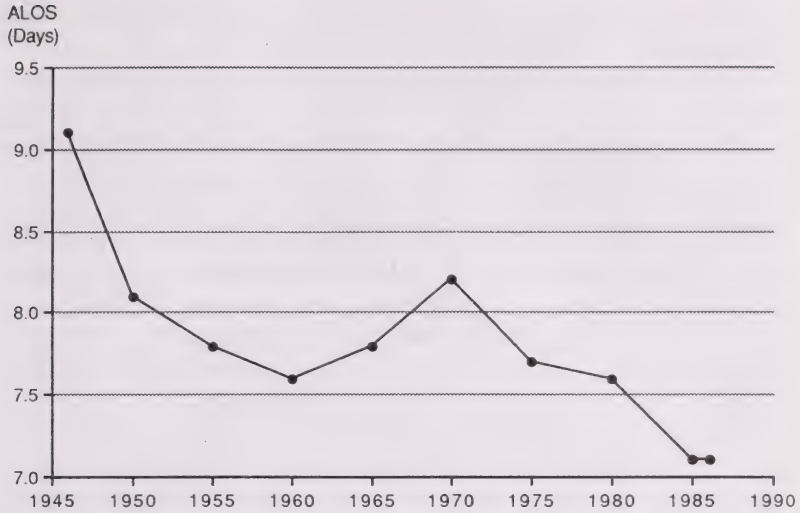

Figure 4. Change in general care average lengths of stay: United States, 1946–1986.
Courtesy of American Hospital Association.

occurred in the early 1950s, in conjunction with the other developments described above. Obviously, the growing number of elderly people in society required appropriate services, but the fact that it was necessary to identify institutions other than hospitals to provide those services is an important commentary on what hospitals had become, or were in the process of becoming.

The Gravy Train

While the combination of expanding private insurance, federal capital subsidies, and an improving scientific base provided the foundation for substantial growth in the hospital industry, the greatest boom came only after the enactment of Medicare and Medicaid in 1965. In one sense, of course, the passage of Medicare was the culmination of 20 years' effort by leaders of the first generation of Social Security to add health insurance to the social insurance system; in that sense, it was also widely perceived as the first step toward some form of national health insurance. Medicare has been so central an aspect of health care in this country for the past 20 years, however, that some particular aspects of its history with

special importance for the development of hospitals tend to be overlooked.

The first of these historical aspects is that the architects of Medicare, with their eyes ever on the goal of incremental movement toward universal, national health insurance on a social insurance model, chose hospital care for the elderly as a strategic first step. In so doing, they obviously sought to extend to a group outside the employment-based insurance system, but already within the Social Security system, the type of insurance that those of working age possessed. By focusing on hospital care, the architects of Medicare were able to follow the pattern of private insurance, while avoiding a direct frontal political confrontation with the highly mobilized physician community — not that doing so helped very much in terms of blunting physician opposition.[10]

It is not always remembered that what became "Part B" of Medicare in fact began its legislative life as a last-minute Republican alternative to the Kennedy-Johnson Administration's Medicare proposal, which contained only what became "Part A" of Medicare. When, rather late in the hearings process, Representative Wilbur Mills, Democratic Congressman from Arkansas, proposed the enactment of both Parts A and B, the administration representatives were at least as surprised as the advocates of the Republican alternative. What has been more widely recognized is the extent to which the Medicare benefit followed the model of Blue Cross, to a degree perhaps inappropriate to the needs of an elderly population more likely to be afflicted with chronic illnesses and more at risk for the sorts of catastrophic expenses which Medicare to this day does not cover.

But just as the increasing technological competence of hospitals, and the growing dependence of the health care system on them, formed the political and policy case for beginning with hospital insurance for the elderly, so too the architects of Medicare self-consciously saw a need to strengthen the hospital industry as a way to give life to the benefits they would be providing. Medicare's framers expected, accurately enough, that its enactment would generate a significant increase in demand for hospital services, which the hospital sector in at least some communities was not adequately equipped to meet. Further, the architects of Medicare perceived, again accurately, significant qualitative and technological inadequa-

10. Marmor, *The Politics of Medicare.*

cies in many hospitals, which they felt the program had to address. Not least, they were eager that program beneficiaries not be treated like second-class citizens by hospitals, that the Medicare entitlement be at least as strong as the private insurance entitlement, and that hospitals have adequate incentive to seek out Medicare patients. In retrospect, it is hard to imagine that the framers of Medicare would be concerned about an inadequate supply of hospitals willing and able to treat Medicare patients, but indeed the documentary record is clear on that point, even if those fears proved misplaced.[11]

Thus, unlike earlier programs for public beneficiaries, Medicare provided for the same standard of semiprivate accommodations as private insurance — there would be no wards for Medicare beneficiaries. Medicare also, of course, contained the principle of "reasonable costs" as the basis for its payments to hospitals. And when the rules for Medicare were written, the interpretation of "reasonable cost," reflecting the concerns of Medicare's architects, went far beyond what had been prevailing Blue Cross principles. In fact, the original definition of reasonable cost under Medicare included what we would now describe as allowable costs plus 2 percent — an add-on created, in effect, to cover any costs that the accountants might have missed. Further, initial Medicare policy interpreted the statutory prescription that reimbursable costs be limited to those incurred in the provision of services to Medicare beneficiaries by permitting enormous flexibility for hospitals to allocate costs between Medicare and non-Medicare patients. The statute already provided for Medicare reimbursement to hospitals of any bad debts created by failure of beneficiaries to pay their coinsurance or deductibles.[12]

Most significantly, Medicare treatment of capital costs went far beyond anything that any other "cost-based" payer had ever permitted. In 1965, most Blue Cross plans did not recognize facility depreciation as a reimbursable cost, on the presumption that hospital capital had historically been generated from the community-at-large through philanthropy or government grants or operating surpluses and would continue to be so. Medicare principles not only permitted the recognition of depreciation expense — even when the assets being depreciated had been initially financed by Hill-Burton

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11. Judith M. Feder, *Medicare: The Politics of Federal Hospital Insurance* (Massachusetts: Lexington Books, 1977).

12. Ibid., pp. 53–79.

grants — but also, in the early years, even reimbursed accelerated depreciation, on the theory that the hospital industry needed to generate additional capital in order to meet the additional demand Medicare was creating. Further, in their anxiety about attracting adequate capital to the hospital industry, the authors of the initial set of Medicare reimbursement principles agreed — probably without adequate statutory basis — to recognize as a reimbursable cost a rather generous return on invested equity for proprietary facilities.[13]

We are accustomed to thinking of the explosive growth in the hospital sector and in hospital costs over the last two and a half decades as causally related to the advent of Medicare, as well as a Medicaid program that was required by statute to use Medicare principles of reimbursement for hospitals. But perhaps we have not always adequately recognized the qualitative as well as quantitative aspects of that influence. Medicare essentially made the development of for-profit hospital chains possible through its treatment of capital expenses (particularly its only recently repealed recognition of "fair market" resale costs for re-basing depreciation when facilities changed hands) and through its guaranteed return on equity. At the same time, Medicare made possible the development of revenue-bond-based public debt financing, which over the last decade became the dominant source of capital for nonprofit facilities, by its recognition of depreciation expense in conjunction with a guaranteed pass-through of operating costs. The essentially unlimited availability of debt financing for individual institutions vitiated, at the same time, any efforts to control or rationalize the duplicative proliferation of facilities, services, or institutions, despite the recognition, from the early days of Medicare on, that such duplication was costing the program considerable money.

The one class of hospitals that did not thrive under the Medicare regime, relatively speaking at least, was urban public institutions. That was partly by design: entitlement of the elderly and, to a lesser degree, of the poor to access to private facilities on essentially the same insurance terms as the middle class drew patients from the public sector to the private sector, in proportions that varied from community to community. Moreover, the mechanisms of municipal finance made it more difficult in many communities

13. Ibid., pp. 57–60.

for public facilities to take advantage of the generous capital provisions of Medicare reimbursement.

The Circle Is Completed

With the advent of Medicare and Medicaid in the 1960s, the self-reinforcing cycle that had begun to blossom with the invention of Blue Cross reached near-perfect fruition. The overwhelming proportion of the population, including those most at risk for serious illness, had health insurance that provided relatively complete coverage for inpatient hospital services, even while coverage for other services remained more limited and inconsistent. Indeed, by the mid-1970s, architects of national health insurance proposals talked largely in terms of residual measures for the small fraction of the population still left uncovered. The revenues made available through both public and private insurance, along with the nature of those revenues as guaranteed cost pass-throughs, permitted hospitals to invest in service and technological improvements to an extent limited only by the imaginations of their trustees and medical staffs.

At the same time, the extraordinary biomedical research and development enterprise built upon the National Institutes of Health cranked out a continuous stream of new techniques, procedures, and treatments that were quickly disseminated throughout the land. The refinement of anesthesiological and surgical techniques, fortuitously combined with Medicare insurance and relatively generous Part B coverage of surgical fees, contributed to a tripling in surgical rates for the elderly (See Fig. 5). Intensive care units were invented, briefly tested, and then replicated in hospitals great and small — Figure 6 shows the growth in the number of intensive care beds between 1975 and 1986 — and there was a concomitant adjustment in Medicare payment practices to recognize their higher costs. When Medicare was enacted in 1965, coronary bypass grafts were being tested experimentally on laboratory animals; by 1984, Medicare was paying hundreds of millions of dollars for 60,000 of the 200,000 bypass procedures performed annually in the United States. Increased demand for an ever-widening range of hospital services fueled and was fueled by an increased demand for hospitalization insurance. Expanded insurance coverage provided hospitals with increased revenues, which were reinvested in service expansion and

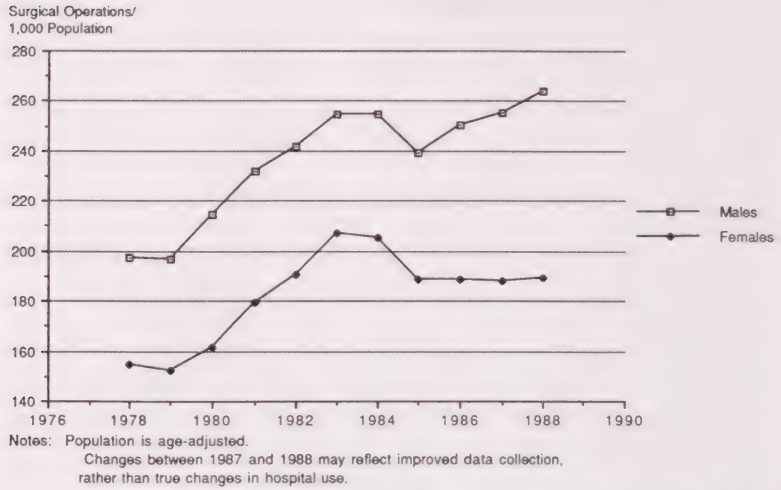

Figure 5. Growth in surgical operations per thousand population age 65 and older: United States, 1978–1988.

Courtesy of the United States Department of Health and Human Services, Public Health Service.

qualitative improvement. The availability of those increased and improved services fed still more demand.

It should be emphasized that this cycle produced demonstrable benefits, to an extent perhaps greater than anyone had expected.

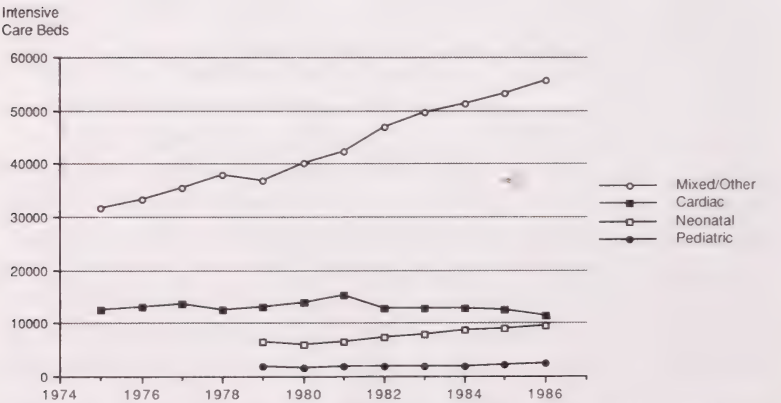

Figure 6. Growth in intensive care beds: United States, 1975– 1986.

Courtesy of American Hospital Association.

Insurance in all its forms improved access to health care services for working people, the elderly, and the poor, and while the benefits of those services were sometimes, at the margin, questionable, the population as a whole became significantly healthier. Death rates fell rather dramatically, especially for the old and the very young, and while most of that had more to do with public health, behavior, and nutrition than with hospital care, at least some of it did involve the hospital. Increases in life expectancy at age 65 and older have been particularly dramatic, amounting to two additional years of life since the enactment of Medicare; while Medicare is clearly not solely responsible, there surely must be some connection.

But no such cycle can feed upon itself indefinitely. Almost from the time Medicare and Medicaid were enacted, concerns about their costs, or more precisely the rate at which their costs were growing, began to develop. However, the political influence of the provider community, along with continuing prejudice against the older "welfare-style" payment systems involving fixed fees or flat rates, deflected policy attention from payment methods. Instead, the initial efforts to control costs concentrated on the insurance side.

Thus, when predictably enough Medicaid became the first target of cost-cutting, those cuts took the forms, first, of limitations on eligibility, then of controls on utilization. Medicaid eligibility standards were initially reduced in 1967, while federal requirements for elimination of retrospective cost-based reimbursement were not imposed on the states until 1981. Similarly, the initial efforts to control the growth of Medicare took the form of limitations on the insurance benefit, especially the benefits for extended care. An emphasis on utilization control followed.

In both private and public sectors, as concern for hospital costs increased through the 1970s, cost containment efforts focused on a continued narrowing of the legitimate role of the general hospital, without serious efforts to affect the growth in unit costs for those services that were believed to continue to fall within the hospital's legitimate domain. Thus, utilization review concentrated on reducing the length of stay; any service that looked like long-term or convalescent care was moved out of the hospital; and both public and private insurers continued to refuse to pay for even those few preventive services that were demonstrably cost-effective.

Given the greater status of high technology services, the continued unlimited flows of insurance support for curative acute services, and the continued disinterest of most physicians in areas other than

curative acute medicine, hospitals accepted this continued shrinkage in their role with eagerness. Chronic disease and rehabilitation units were closed or, more frequently, converted to acute medical-surgical floors; lengths of stay shrunk, and occupancy rates fell with them. The one new technology that hospitals showed little interest in was chronic maintenance kidney dialysis. Hospitals became a high-turnover business. Despite extensive rhetoric about hospitals as the "hub" of comprehensive community health systems, institutions were more likely to turn inward than outward during the 1960s and 1970s.

Even with continued technological development, as the mission of hospitals simultaneously narrowed and deepened and the expansion of hospital capacity continued apace, competition among hospitals for the favor of physicians was reinforced and accelerated. Again, a trend that began with the emergence of the "modern" hospital strengthened: as hospital capacity continued to exceed the shrinking patient base and as the supply of physicians grew slowly until the mid-1970s, the attraction of technologically proficient attending staff became ever more important.

As hospitals themselves became increasingly cognizant of the inevitability of an end to this cycle, of the un-sustainability of cost increases, the one solution they most strenuously resisted was external control on unit prices for high technology services. Hospitals tolerated utilization controls and franchising — through certificate of need regulation — of new facility construction, but resisted certificate of need controls on technology acquisition. They also strenuously opposed price controls, the one intervention that might have prevented the growth cycle from collapsing altogether. Despite the evidence that, where these controls worked reasonably well, they not only ameliorated the pressures from payers for cost containment, but also protected large segments of the industry from severe economic buffeting.

The Gravy Train Derails

What finally broke the cycle was the transformation of the insurance system. Freud says that most neuroses are over-determined,[14] and it has been suggested that most major historical upheavals are, too. It is clear that, since the early 1980s, health insurance in the United

14. Sigmund Freud, "Third Lecture," in *Five Lectures on Psychoanalysis,* James Strachey, transl. and ed., (New York: W. W. Norton & Company, 1977), p. 38.

States has undergone the most significant changes since the invention of Blue Cross. It is also clear that there are more explanations for that phenomenon than the facts fully require.

One of the factors was the development of an intellectual rationale for the reduction in the real value of private insurance coverage for working people. Some conservative economists had long sought to blame the problem of health care costs on the "moral hazard" of insurance.[15] Beginning in the late 1970s, with the work of Alain Enthoven, Walter McClure, Clark C. Havighurst, and others, what was added was the notion that *policy* should intervene to restructure traditional insurance practices in order to produce the desired behavioral changes among health care providers.[16] Insurance-based approaches to cost containment were no longer limited to fiddling with coinsurance and deductibles. What came under attack were the very notions of beneficiary freedom of choice of providers, service benefits, and indeed, of group- or community-wide pooling of risk.

A related intellectual rivulet fed the same stream. Health economists, health services researchers, and clinicians began to explore the extent to which contemporary medical practice had reached the "flat of the curve," where marginal costs exceeded marginal benefits, but where the shielding of consumers from those costs encouraged overuse. John Wennberg and his colleagues demonstrated that wide variations in surgical procedure rates across communities were not correlated with measured differences in health status.[17] At the extreme, these arguments led to a kind of "therapeutic nihilism," which held that only heredity, environment, and behavior really mattered, and that most health expenditures were as likely to cause iatrogenic harm as therapeutic good. If these arguments were true, then one did consumers no favor by "overinsuring" them.

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15. Kenneth J. Arrow, "Uncertainty and the Welfare Economics of Medical Care," *The American Economic Review,* 1963, *53*:961.

16. See Alain Enthoven, *Health Plan: the Only Practical Solution to the Soaring Cost of Medicare* (Reading, MA: Addison-Wesley, 1980); Walter McClure, "The Medical Care System Under National Health Insurance: Four Models," in Kenneth M. Friedman and Stuart H. Rakoff, eds., *Toward a National Health Policy: Public Policy and the Control of Health Care Costs* (Lexington, MA: Lexington Books, 1977); Clark C. Havighurst, *Deregulating the Health Care Industry: Planning for Competition* (Cambridge, MA: Ballinger, 1982).

17. John E. Wennberg and Alan Gittelsohn, "Small Area Variations in Health Care Delivery," *Science,* 1973, *182*:1101–1108; John E. Wennberg and Alan Gittelsohn, "Health Care Delivery in Maine. I. Patterns of Use of Common Surgical

Armed with this intellectual rationale and faced with enormous cost pressures, the most severe economic downturn since the 1930s, and a labor market in considerable surplus, employers discovered that the unthinkable had become the fashionable: employee health benefits could be substantially reduced without calamitous effect on the general well-being of the enterprise. While employees remained, to a considerable degree, willing to trade off wages for benefits, they were agreeing at the same time to wage givebacks and similar measures.

Meanwhile, many people were simply out of work. Given both how widespread health insurance had become by the late 1970s and how many people became unemployed in the early 1980s, it is probable that the first few years of the 1980s saw more people *lose* health insurance coverage than any other time in history. Moreover, as the unemployed became reemployed, they did so not in the traditionally high-wage, high-benefit manufacturing industries but in lower-wage, less benefit-intense service occupations. Despite all the rearrangement of their benefits, autoworkers and steelworkers still have substantially better health insurance coverage than employees of fast food restaurants or retail stores, but the national economy now has many fewer of the former and many more of the latter.

Of course, while the middle class saw its insurance coverage reduced, the poor frequently saw theirs eliminated altogether (See Fig. 7). The proportion of poor and near-poor people enrolled in Medicaid in 1985 was lower than at any time since the program came to full implementation in the early 1970s (See Fig. 8). And as relatively fewer poor people benefitted from Medicaid, it became politically easier and more acceptable to narrow the benefits for those who still had Medicaid coverage.

The impact of these developments on hospitals was exacerbated by the concomitant explosion in physician supply, combined with the development among physicians of an increasing perception that the days of lucrative private fee-for-service practice were numbered. At the margin, there has always been a substantial area of overlap between those services physicians could supply in hospitals and those they could supply in their own offices — or in some expanded and glamorized version of offices. So long as patients had

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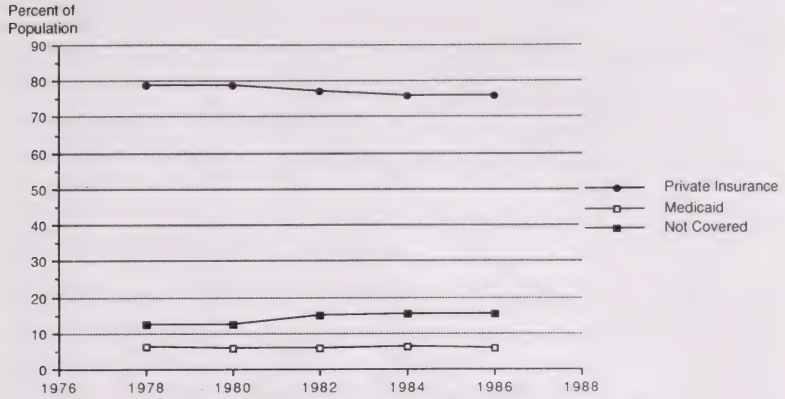
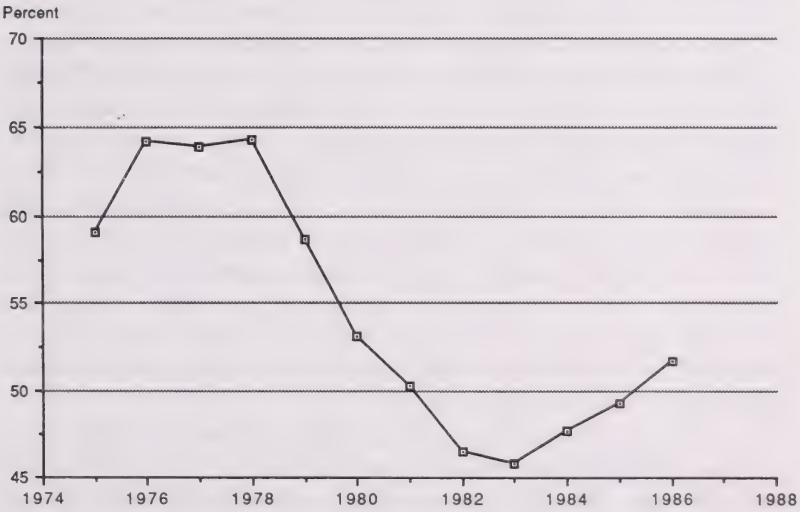
Procedures," *Journal of the Maine Medical Association,* 1975, 66: ; John E. Wennberg and Alan Gittelsohn, "Variations in Medical Care Among Small Areas," *Scientific American,* 1982, 246:120–134.



Notes: Population is age-adjusted.
Private insurance and Medicaid include persons covered by both.

Figure 7. Percent of population under age 65 by type of medical coverage: United States, 1978–1986.

Courtesy of the United States Department of Health and Human Services, Public Health Service.



Note: 1986 includes includes both fiscal and calendar year data.

Figure 8. Percent of poor and near-poor with Medicaid coverage: United States, 1975–1986.

Courtesy of the United States Department of Commerce, Bureau of the Census, United States House of Representatives.

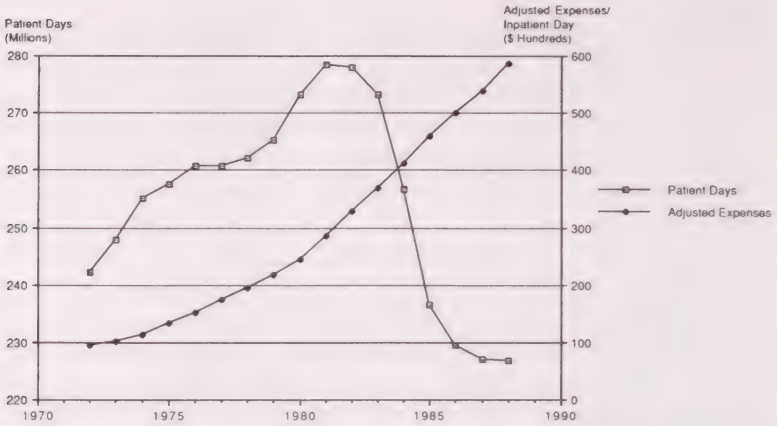


Figure 9. Change in inpatient days and adjusted expenses per inpatient day: United States, 1972–1988.
Courtesy of American Hospital Association.

significantly better insurance coverage for in-hospital services and the supply of patients per practicing physician was growing or was at least relatively stable in most markets, physicians were happy to supply services where they had experienced their training — under hospital roofs. But as the ratio of potential patients to practicing physicians began to shrink dramatically at the same time as insurance patterns shifted, physicians began moving away from hospitals as rapidly as they could. In this movement they were abetted and encouraged by further technological advances which made out-of-hospital services increasingly practical and reasonably safe, and by the development of a new class of entrepreneurs who recognized that increasingly apprehensive physicians would be increasingly willing to earn their incomes in something other than conventional fee-for-service private practice.

Thus, beginning in late 1982 or early 1983, hospital utilization, which had grown continuously and relatively predictably since the end of World War II, began to plummet (See Fig. 9). The bottom fell out. It must be emphasized that essentially all the reduction in the growth rate of hospital expenses that has occurred since 1982 is attributable to declines in utilization; controlling for the general inflation level in the economy as a whole, the unit costs of hospital services have continued to increase at the rates that prevailed in the

late 1970s. There has been some tendency to attribute this utilization decline to the advent of Medicare's Prospective Payment System (PPS), enacted in 1983, although in actuality the downturn predated the inception of PPS and has been greater for the non-Medicare population. The economics of PPS actually provide hospitals with significant incentives to increase admissions.[18]

The Management of Care

The changes in patterns of health insurance now occurring involve two separate and quite distinct phenomena which will have different, but interactive, effects on hospitals. First, fewer people will have *good* health insurance. The number of uninsured individuals has increased largely as a result of labor market changes, but it is likely to increase further as employers become more sophisticated about avoiding group-market subsidies and employees increasingly have economic incentive to self-select on the basis of actuarial risk, raising relative prices for those in higher risk groups and eventually driving some in those groups from the market altogether. Second, for those who continue to have relatively good insurance — however many such people there may be — benefits will increasingly be limited by some form of health maintenance organizations (HMOs), preferred provider organizations (PPOs), or "managed care" fee-for-service programs in which providers are constrained by stringent utilization controls administered by the insurer of the self-insured employer.

The principal dynamic by which "managed care" programs seek to reduce insurance costs is the reduction in inpatient hospital utilization. HMOs, of course, have long achieved savings relative to conventional insurance precisely by providing lower levels of inpatient use compared to fee-for-service arrangements. What the new generation of independent practice associations, or IPAs (a type of HMO), sophisticated PPOs, and other plans appear to have discovered is how to provide the right kinds of economic incentives to the new generation of physicians to encourage them to adopt patterns of inpatient utilization similar to those more traditional HMOs have experienced.

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18. Prospective Payment Assessment Commission, *Medicare Prospective Payment and the American Health Care System: Report to the Congress* (Washington, DC: Prospective Payment Assessment Commission, 1989).

The non-elderly population of the United States uses about 850 days of inpatient care per 1,000 people. For years, Kaiser-Permanente's utilization in the range of 350 days per 1,000 was a kind of touchstone for utilization control efforts, its extremely low level being attributed not only to Kaiser's widely admired management practices but also to its concentration on the relatively low-utilization West Coast and the characteristics of the population it insured.[19] Yet the ambitious, entrepreneurial, new managed-care ventures are promoting utilization targets on the order of 250 days per 1,000, and while their attainment of those goals will clearly depend on their ability to limit enrollment to only very healthy people, there is substantial room in the current environment for dramatic reductions in utilization among the *entire* insured population.

In this regard, it is ironic — and disconcerting — to see hospitals falling all over themselves and one another to enter relationships with organizations that make their living by keeping people out of hospitals. On any given day now, insured people of working age and their dependents occupy fewer than one-third of the nation's general hospital beds (almost one-third are unoccupied altogether, and the rest are used by Medicare and Medicaid patients and other publicly supported or non-supported patients). If the utilization of these insured working age people and their dependents falls over the next decade by, for example, 50 percent, then not many hospitals will be able to stay very busy through contracts with their care managers.

Although the room for reduction in Medicare inpatient utilization would appear to be quite substantial, the publicly insured — for the time being, at least — will be more likely to continue to use inpatient hospital care, largely because they tend to be considerably sicker than the privately insured. And then there are the growing numbers of people who will need inpatient services but have no insurance, or very limited insurance, with which to pay for them.

The fabric of health insurance is clearly unraveling, and just as there has long been a very strong inverse correlation between income and risk of illness, so there is likely to be a substantial growth in the until recently somewhat weaker inverse correlation between insurance coverage and illness risk. The well and healthy

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19. Harold S. Luft, *Health Maintenance Organizations: Dimensions of Performance* (New Jersey: Transactions Publications, 1986).

will have managed care to keep themselves out of hospitals; the sick will have less insurance.

This overstated scenario obviously bodes ill for most hospitals. Even relatively healthy insured populations will experience some very serious episodes requiring sophisticated inpatient treatment, for which their insurers will be prepared to pay quite a high price for the actuarially infrequent event. But, as noted, that will not keep very many hospitals busy. On the other hand, there will still be a reasonable amount of illness to be treated, but those with the illnesses will be less well insured. Patients with AIDS, or acquired immunodeficiency syndrome, may be an interesting — and distressing — harbinger in that regard.

Back to Basics

Even a decade ago, in the fullest flowering of the insurance-based growth of the hospital industry, large numbers of people who could have benefited from high-quality inpatient services were not receiving them — at least not in general hospitals. The chronically mentally ill have been, in many communities, the most visible such group; perhaps the most tragically situated have been those of the seriously impaired elderly who were, in fact, in general hospitals, were defined as no longer "needing" acute services, but were unattractive to operators of long-term care facilities, and thus consigned to the limbo of "alternate care" status for weeks or even months. Of course, it is generally believed, with much good reason, that hospitals were excessively expensive and qualitatively inadequate sites for the care of such people.[20]

Thus, on the one hand, we have — or will have — a highly inadequate supply of patients needing acute curative interventions of a kind that, technically, can only be supplied in hospitals, to support a hospital enterprise of anywhere near the size that now exists. Moreover, on the ever-moving margin, changes in insurance patterns will increasingly push more and more insured patients outside the hospital, while the demand generated by that pushing will encourage still further technological innovation designed to permit or even encourage service on an outpatient basis. On the other hand, we appear to have a growing number of very frail

20. Dana Gelb Safran and Elizabeth A. Eastwood, *Transitional Care: The Problem of Alternate Level of Care Patients in New York City Hospitals* (New York: United Hospital Fund, 1989).

elderly people, of chronically mentally ill people, of permanently disabled non-elderly people, of people addicted to substances of one kind or another, and of the literally or figuratively battered and abused, for whom this society, at this point in its history, seems literally to have no place.

Yet the insurance-driven system of health care in the United States has created a conception of the hospital as a place of increasing technological invasiveness, increasingly short confinements, increasing specialization and subspecialization, and as a result, of increasing expensiveness, so that we have trouble imagining the hospital as an appropriate place to care for all the people who need care but who are not now receiving it. An illustrative paradigm — and a true one: the City of New York, legally obliged to provide shelter for an ever-growing number of homeless individuals and chronically short of adequate shelter capacity, proposed to establish a shelter in a city hospital that had been abandoned because of physical and technological obsolescence and because its inpatient capacity really was not needed anymore for acute services. The community in which the hospital was located, which had bitterly resisted its closing, resisted with comparable fervor its being used for the not totally unrelated purpose — at least in historical perspective — of sheltering the homeless.[21]

If hospitals want to continue to be the kinds of institutions they have been for the last two generations, they will have to go out of business in large numbers. If they want to stay in the business for which they were originally created, they will have to become very different kinds of institutions. And they will have to discover an entirely new financial base or rediscover an old one in order to do so. For the capacity to support hospital services with health insurance dollars originating in employer-paid premiums clearly is not going to persist, even if employers discover — as I suspect many will — that the brave new world of managed care consumes no fewer dollars but, instead, reallocates those dollars away from institutions and toward physicians, bureaucrats, and entrepreneurs. In 1950, roughly 7 out of every 10 health insurance premium dollars were paid out to hospitals; by 1970, the proportion still exceeded 60 percent; by 1983, it was barely half, and by now I suspect it is

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21. See "New York Gets Court Assent on Replacing Hospital," *New York Times,* 16 June 1982, *131*:14; "Shelter Makes Room for Families, Elderly" *Newsday,* 20 December 1989.

less than half.[22] The link between hospitals and insurance that made the modern hospital possible has been broken, and it is difficult to see how it can ever be restored.

Finding New Revenues in Old Traditions

The evidence seems to suggest that as a society, we have never been willing to support services for the chronically ill who are more or less permanently out of the labor market as generously as we have supported services for the acutely ill of working age. The current political and fiscal climates hardly bode well — at least at first glance — for significant expansion of such support. But just as a self-reinforcing cycle characterized the combined growth of hospitals and hospital insurance, so a kind of negative self-reinforcing cycle has characterized what we have come to define as non-acute services. Hospitals, traditionally the most prestigious and influential human service institutions in most communities, have been discouraged by conventional insurers from providing anything but conventional acute care. Conversely, in an environment in which acute services were generously reimbursed while non-acute services were inadequately funded, hospitals naturally shied away from the latter. Since the institutions best situated to generate support for non-acute services were consciously and often conspicuously uninterested in such services, little support was generated. With little community support for expanded funding, non-acute services continued to be underfinanced. And so this cycle, too, continued to feed upon itself.

If hospitals come to decide that they should increasingly enter — or reenter — the business of caring for the chronically ill of one sort or another, they are going to have to decide at the same time that only they can lead the process of generating adequate momentum for financing of those services. As it did in the 1930s, the hospital community itself will have to devise the mechanisms through which community resources can be tapped, in one form or another, to support the services hospitals will provide. The alternative for the hospital sector as a whole, it seems, is increasingly fierce competition for a smaller and smaller complement of insured acute cases, a competition which, almost by definition, most hospitals cannot win.

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22. For data on national health expenditures, see the annual supplement to *Health Care Financing Review.*

Strategies for Survival

In fact, to perhaps a greater extent than has been generally realized, hospitals have been turning their attention to chronic care patients for some time, however incrementally and sporadically. Over the last decade, general hospitals have opened beds for inpatient psychiatric care, while closing net, medical-surgical, and pediatric beds. The national proprietary hospital chains have, for all intents and purposes, stopped investing in general care hospitals, while concentrating new investments in inpatient psychiatric, substance abuse, and, to a lesser degree, rehabilitation facilities.

In responding to Medicare's Prospective Payment System (PPS), hospitals have also increasingly discovered the needs of the chronically ill elderly and the absence, in most communities, of a sufficient supply of adequately financed services for them. In the short run, hospitals are responding by taking advantage of the exemption of rehabilitation and psychiatric facilities from the Medicare PPSs, and by developing hospital-operated home care and nursing home programs. Many of them will be in for quite a shock when they discover how much harder it is to prosper financially in long-term care under existing financing arrangements than hospitals have been accustomed to in the acute sector. However, perhaps that shock will help mobilize the hospital community to recognize its own stake in the development of better financing arrangements for long-term care.

In that process, and indeed relative to the future of hospitals in general, the single most important issue is the future of Medicare. Not only is Medicare the single largest source of hospital revenues; it is, at the same time, the insurance program where the most dramatic reductions in inpatient acute utilization are still to come, while the population Medicare insures is the only group, demographically, from which increased demand for health services of any kind is likely to arise over the next generation. Whether or not those who now run Medicare like it or are prepared to acknowledge it, Medicare is also still the primary insurer of those with the greatest needs for chronic care services. And Medicare has a substantially greater existing stake in chronic-care services than many realize. Just as the creation of Medicare was the final piece in the puzzle of the now vanishing acute hospital/insurance system, so the reconfiguration of

Medicare will be the pivotal process in recreating a sound basis for hospital finance.[23]

The absence of fit between Medicare's benefit structure — borrowed, as it was, almost whole cloth from the Blue Cross model for a working-age population — and the needs of Medicare beneficiaries, though not entirely unnoticed at the time of Medicare's enactment, has become increasingly apparent ever since. Thanks, at least in some degree to Medicare itself, the over-65 population is aging dramatically well. The elderly today are far more likely to survive acute illnesses and to live even longer with multiple chronic conditions than in the past.

In the "Alice in Wonderland" semantics of health care financing, this problem is most dramatically manifested in the form of "catastrophic" expenditures encountered by a fraction of Medicare beneficiaries. Those whose chronic conditions necessitate multiple, extended hospitalizations, extended spells of in-home care, or confinement in nursing homes or similar institutions, quickly run out of Medicare benefits and typically must exhaust their personal financial resources in order to become eligible for Medicaid coverage. The average Medicare beneficiary now experiences uncovered, out-of-pocket health care costs that are as large in proportion to available income as those the average elderly person faced before Medicare was enacted — primarily because a minority of beneficiaries encounter such staggering expenses.

The implications for hospitals are clear. Medicare will pay relatively less for acute inpatient services, either by squeezing per-case reimbursement or by capitating intermediaries so *they* will squeeze hospital use and prices, or most likely by both — however, mandatory enrollment of Medicare beneficiaries in capitated arrangements dramatically oversteps the bounds of political plausibility. But coverage for other forms of inpatient care will expand, and if Medicare somehow drops the ball, less satisfactory and comprehensive private arrangements will emerge. For both economic and ideological reasons, hospitals have long resisted development of such non-acute services, but both financing and demand will impel them in that direction in the future.

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23. Bruce C. Vladeck, "Hospitals, the Elderly, and Comprehensive Care," in Carl Eisdorfer and George L. Maddox, eds., *The Role of Hospitals in Geriatric Care* (New York: Springer Publishing Co., 1988), pp. 35–48.

Conversely, I think that those who expect that hospital finance can be transformed by having hospitals serve as the managers of care for the privately insured and the healthy Medicare population are, at the least, overly optimistic. It is difficult to believe that in the long run, hospitals will be able to compete with physicians and the entrepreneurs who organize them. Increasingly, one can deliver most medical care to insured populations without very much hospitalization, but one cannot deliver it at all without physicians. With so much excess hospital capacity and with hospitals still so dependent on physicians for the delivery of services, non-hospital-based care managers should be able to pick and choose, on favorable terms, among institutions for the provision of relatively small quantities of inpatient services.

Even as their role in serving the insured population diminishes, hospitals will continue to be institutions valued by communities as *community* resources. People will still want their town or neighborhood to have a fully equipped emergency room, even as they increasingly seek treatment in more comfortable surgicenters — or have their doctors make housecalls. The majority of mothers will probably still prefer to deliver in hospitals, even if they do so in lounge chairs in birthing rooms and go home the next day — but the bubble of delayed fertility for baby-boomers will soon burst. Demand for transplants, back and hip surgery, and cancer surgery will continue to grow — and cannot be met by freestanding surgicenters.

However, the insurance system, as it appears to be reconstituting itself, cannot support an adequately large system of hospitals *qua* community service resources. As the experience of many rural hospitals appears to show, the standby and overhead costs are too great for the diminishing volume of profitable, easy cases. The ratio of subsidy-paying patients to subsidized patients has gone askew.

In order to generate adequate revenues to survive in reasonable numbers, hospitals will need to adopt a three-pronged strategy. First, for those services for which they remain monopoly providers — that is, technologically intensive, curative services that cannot be provided elsewhere — hospitals will need to set considerably higher relative prices, as insurers accept much higher unit prices for drastically reduced volume. (If properly used, DRGs can actually provide considerable assistance in that regard.) Second, if the non-Medicaid poor are going to continue to get the same kinds of services the insured receive, hospitals must find new forms of community subsidy. Inter-hospital cross-subsidization, as it has worked

so well in New York State and elsewhere, will collapse if uncompensated care goes to 15 or 20 or 30 percent of costs. An excise tax on physician fees is an interesting potential substitute. Third, hospitals must take the lead in developing better mechanisms for financing chronic care.

The dollars already in the systems that now care for the chronically ill, apart from Medicare, come primarily from three sources. The most important of these sources is probably income support — Supplemental Security Income (SSI), Social Security, private disability insurance, and home relief — with which the chronically ill buy shelter and some supportive services. Direct government expenditures, largely derived from state and local tax levies, are also significant in terms of the budgets of public mental institutions, public nursing homes, substance abuse treatment centers, and the like; increasingly, states have also been able to use federally matched Medicaid dollars to finance these services. Finally, philanthropic support, while nowhere near adequate, provides a higher proportion of revenue for many of these services than it now provides in the hospital sector.

These, then, are the sources, necessarily much expanded, to which hospitals increasingly will have to look to supplement a reconfigured Medicare program, indigent care subsidies, and a little insurance-derived income — if the basic thesis of this article is correct. At the present, all these sources, *in toto*, are nowhere near adequate to support the supply of services that will be needed — but neither was community support of hospitals anywhere near adequate before hospitals undertook the creation of Blue Cross.

Even if hospitals can manage to lead the development of better financing mechanisms for services to the chronically ill and socially displaced, one would not expect these new mechanisms to be anywhere near as generous to service providers as Medicare, Medicaid, and Blue Cross were to hospitals until recently. Under any circumstances, hospitals will increasingly need to relearn how their counterparts in the human services have always operated — on the margin, on a shoestring. We can expect to hear less conversation about capital accumulation and revenue-producing services, and more talk about deficit financing. The wheel will have come full circle, indeed.

Conclusion

In this configuration, the hospital of the future will be much less dependent on an attending medical staff and more heavily dependent on nurses and nonprofessional caregivers, including many volunteers. It will be, on balance, much less technologically and capital intensive than contemporary hospitals, although it will retain a monopoly hold on the very highest technologies. It will be poorer, relatively speaking. However, if it is effectively serving all those in the community who need inpatient health services, the hospital will survive — and society will prosper.

United Hospital Fund
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New Books In the History of Medicine in the Historical Collections of the Library, January through March 1990

JACK ECKERT

Kate Arnold-Forster and Nigel Tallis, *The Bruising Apothecary: Images of Pharmacy and Medicine in Caricature* (London: Pharmaceutical Press, 1989).

Robert H. Blank and Miriam K. Mills, eds., *Biomedical Technology and Public Policy* (New York: Greenwood Press, 1989).

Jack S. Blocker, Jr., *American Temperance Movements: Cycles of Reform* (Boston: Twayne Publishers, 1989).

Thomas D. Brock, *Robert Koch, A Life in Medicine and Bacteriology* (Madison, WI: Science Tech Publishers, 1988).

Barbara Brookes, *Abortion in England, 1900–1967* (New York: Croom Helm, 1988).

Mark Caldwell, *The Last Crusade: the War on Consumption, 1862–1954* (New York: Atheneum, 1988).

Donald Denoon, *Public Health in Papua New Guinea: Medical Possibility and Social Constraint, 1884–1984* (Cambridge: Cambridge University Press, 1989).

Lynn Gamwell and Richard Wells, eds., *Sigmund Freud and Art: His Personal Collection of Antiquities* (Binghamton, NY: State University of New York, 1989).

John R. Guy, *Malachi's Monument: the Taunton & Somerset Hospital at East Reach* (Roundham Press, 1986).

Colin Jones, *The Charitable Imperative: Hospitals and Nursing in Ancien Regime and Revolutionary France* (New York: Routledge, Chapman and Hall, 1989).

Katalög der Bibliothek des Homoöpathie-Archivs aus den Beständen des Instituts für Geschichte der Medizin der Robert Bosch Stiftung (Stuttgart, Germany: Institut für Geschichte der Medizin der Robert Bosch Stiftung, 1988).

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Doreen Evenden Nagy, *Popular Medicine in Seventeenth-Century England* (Bowling Green, OH: Bowling Green State University Popular Press, 1988).

Charles B. Pittenger, *James Tayloe Gwathmey, M.D., American Pioneer Anesthesiologist* (Nashville, TN: Vanderbilt University School of Medicine, Department of Anesthesiology, 1989).

Ronald Rainger, Keith R. Benson, and Jane Maienschein, eds., *The American Development of Biology* (Philadelphia: University of Pennsylvania Press, 1988).

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Robert S. Sparkman, ed., *The Southern Surgical Association: the First 100 Years* (Philadelphia: J. B. Lippincott, 1989).

Transylvania University Library, *Catalogue of the Transylvania University Medical Library* (Lexington, KY: Transylvania University Press, 1987).

P. J. and R. V. Wallis, *Eighteenth Century Medics*, 2nd edition, (Newcastle Upon Tyne, England: Project for Historical Biobibliography, 1988).

Gerhard Wehr, *An Illustrated Biography of C. G. Jung*, Michael H. Kohn, trans., (Boston: Shambhala Publications, 1989).

Paul Weindling, *Health, Race and German Politics Between National Unification and Nazism, 1870–1945* (Cambridge: Cambridge University Press, 1989).

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Review

ROSEMARY A. STEVENS. *In Sickness and in Wealth: American Hospitals in the Twentieth Century.* 432 pp. New York: Basic Books, 1989. Price $24.95

Reviewed by H. ROBERT CATHCART

Rosemary A. Stevens's book, *In Sickness and in Wealth: American Hospitals in the Twentieth Century,* has been a rude awakening; indeed, she has opened *my* eyes. I have spent so many years directing all of my energy toward our hospital's day-to-day survival, that I have not heeded the larger picture. In short, there has been too much attention on the trees and not enough on the forest. Stevens, who is professor and chairman of the Department of History and Sociology of Science at the University of Pennsylvania, has concentrated here on the forest. When I first read *In Sickness and In Wealth,* I did not know I would be asked to review it. I believe this is an advantage. I can now share with you my immediate and genuine reaction to the book, my reaction as a hospital manager whose concentration is not compromised by the need to summarize, debate, and/or endorse the premise set forth in the work.

I am an Iowan who has become a Philadelphian, and my job is to manage the nation's first hospital, to make quality health services available to the sick poor, to insure a satisfied and productive professional staff, and to fulfill the mission of the governing board. I lead a tightly scheduled life, dominated by continuous lobbying; I am being evaluated and rated by my various constituencies every day. The job I hold must be one of the best in the world, but after reading Rosemary Stevens's book I recognize that I have not tapped the full potential of opportunities available to me; and that is not only my loss, but my employer's as well. Overseeing new construction, keeping up with new technology, and interacting daily with patients makes for a busy schedule, and all of these activities compete for my attention, while at the same time diverting it from the problems and opportunities Stevens describes.

While far from satisfied with the track record of American hospitals, Stevens recognizes that they are, if only by default, the logical resource for a better, more cost-effective health service system for the nation. She is urging hospitals to step to the forefront

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and provide the impetus, as socially responsible community leaders, for better, more efficient medical care. If hospitals will do this, she believes there is hope for the future. As a hospital manager, I agree. I want hospitals to assume this role. Yet, such leadership requires firm and farsighted governing board stewardship, with clear recognition that institutional success will not always dovetail with community needs, and that when this is the case, community needs must be respected.

Many of us in the hospital world know we are not doing enough, and we know that most hospitals have the ability to do more by stretching just a bit further. Perhaps an increase of 1 or 2 percent of total revenues might be an attainable goal. (In the United States, total hospital revenues for 1988 were over one hundred and seventy-four billion dollars. One percent would mean a figure in excess of one billion, seven hundred and forty million dollars, a substantial transfusion for a weakened social welfare system.)

Stevens also calls for increased public accountability for hospitals. Hospitals spend public and patient funds, yet few demonstrate an accountability for these disbursements. The commercialization of health services has been acclaimed as an appropriate means of ensuring cost-effectiveness. Stevens has made me realize the other consequences of this commercialization. As a result, we will be taking steps to swing the energies of our hospital toward an even higher level of quality patient care than now exists; it is an important element in the solution of problems and not the cause, as Stevens points out. We hope other hospitals will be doing the same.

In Sickness and In Wealth is an absorbing, well-researched book, and for professional hospital managers like myself, it provides a healthy new perspective. It helps us to comprehend better what we do, why we do it, and what it means for the future. It demands that we direct more of our attention and our energies to long-term societal issues. To define what we do, and why, is in itself a significant achievement; planting the right seeds for the future is a much greater challenge. Action toward these ends by one or a few hospitals is a step in the right direction and should be encouraged. But for this movement to pick up momentum and be successful, it requires industry's leadership, perhaps from trade associations such as the American Hospital Association (AHA). Like most associations, the AHA moves slowly, and is particularly sluggish in reaching new policy decisions. Quite probably, what is needed are a few charismatic leaders who are willing to step forward and help plot

and direct a new course for the goals and missions of American hospitals.

Hospital governing boards could supply one of the best sources of talent for this new thrust. These boards are comprised of people who often have public respect and are viewed by society as more objective than hospital administrators or the medical hierarchy. I think Stevens's book should be required reading for all hospital trustees.

Stevens's book will elicit much consternation and debate among hospital officials across the nation. She has told us things that we may not have wanted to hear, but certainly we needed to hear them. There is no longer time for debate; we should accept Stevens's findings as a course of action to preserve a system that has worked exceedingly well, but that can now become better by being more socially conscious and responsive to the needs of the nation. We thank you, Dr. Stevens, for pointing the way.

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Memoirs

Memoir of Carl Castle Fischer, 1902–1989

HERBERT J. DIETRICH, JR.

Like the New Testament parable of the servant who was given five talents, Dr. Carl Castle Fischer produced five others during his 45 years of distinguished service to medicine and its institutions. He died on 23 December 1989 at Delray Beach, Florida, his retirement home for the past 17 years, after an illness of three weeks. Prior to this, he had been active and in good health.

Carl Fischer was born in Philadelphia on 13 October 1902, the son of John Fischer, M.D. Carl was educated in the Philadelphia public schools, and graduated as the valedictorian of his class from Frankford High School in 1920. He undertook his pre-medical studies at Princeton University, and received a bachelor of science degree with general academic honors in 1924. While at Princeton, Fischer was a member of the varsity soccer team and the Triangle Club, a dramatic society — interests which foreshadowed his prowess as a "team player" and "stage manager" in his later medical activities.

He then entered upon the study of medicine at Hahnemann Medical College and Hospital of Philadelphia (now Hahnemann University) and, in 1928, received the degree of Doctor of Medicine. As was customary at Hahnemann in this earlier day, the degree of Doctor of Homeopathic Medicine was concurrently awarded. An internship at Hahnemann was followed by a year's postgraduate work in St. Louis and New York. Within the next five years, Dr. Fischer had become a Diplomate of the American Board of Pediatrics and a Fellow of the American College of Physicians.

Carl Fischer's professional career was centered at Hahnemann for 40 years, until his final retirement in 1969. He was unusually effective as a teacher, researcher, and clinician; and he had a particular talent for discovering and promoting within students and younger physicians abilities of which they had been only vaguely aware. In 1945, Dr. Fischer became professor and chairman of the

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Pediatrics Department — an appointment he thought might have been delayed by a few years because of his forthrightness in expressing views that were not always in accord with those of the hierarchy. Nevertheless, he served in this post with distinction for the next 22 years, becoming professor emeritus of pediatrics in 1967. Thereafter, he served as associate director of medical affairs for Hahnemann Hospital until 1969, when he was appointed project director for the study and report *The Delivery of Health Care to Children* for the American Academy of Pediatrics (1969–1971).

For nine years prior to his academic retirement, Dr. Fischer was director of health service at Girard College, Philadelphia, and for most of that time, he and his wife Mary occupied a house on the Girard College campus. On assuming this assignment, he initiated annual physical examinations of the students. When it came to the heart examinations, he noticed a small band of students standing apart from the rest. As he inquired about this, a spokesman for the group announced, "*We* are the murmurs." "You are the *what*?", Dr. Fischer asked. The preceding physician had placed strict limitations on these students' physical activity, labeling them "murmurs" for their irregular heart beats. After examining them, Dr. Fischer sent them all down to do a few laps around the track, hoping, as he said, "Some unkind fate wouldn't prove me wrong!"

Carl Fischer gave generously of his time to societies of organized medicine, at the local, state, and national levels. At various times he served as a director of the Philadelphia County Medical Society and as a councillor of the College of Physicians of Philadelphia. In 1961–1962, he served simultaneously as president of the Philadelphia Pediatric Society and as president of the American Academy of Pediatrics. At that time a feature article in the *Medical Tribune* fittingly described him as "the Pediatrician's Pediatrician." His private practice, usually helped by the very able young associates he had selected, abounded in families of other doctors and coworkers.

Numerous civic organizations and governmental agencies having to do with the health and welfare of children, particularly the handicapped and environmentally distressed, were beneficiaries of Dr. Fischer's expertise. He was a past director of the Children's Heart Hospital of Philadelphia and a director and past president of the Heart Association of Southeastern Pennsylvania. He was also a member-at-large of the Philadelphia Council of Boy Scouts of America.

Carl Fischer, in addition to teaching the basic pediatric curriculum, taught students the responsibilities of physicians not only to their patients but also to the public. He worked to establish useful links between academic medicine and the practical aspects of supplying the best possible health care to the public. He had extraordinary forensic abilities in moderating opposing points of view, in amalgamating what is worthwhile and discarding the chaff, and, above all, in sharing with co-workers the credit for good results and accepting, himself, responsibility for any bad ones. Demanding work was always leavened by Dr. Fischer's congenial disposition and ever-present sense of humor.

He was a member of Medical Authors, Inc., and authored a textbook, *The Role of the Physician in Environmental Pediatrics.*[1] Fischer contributed about 60 publications to the medical literature, as author or co-author, on a variety of subjects from neonatal care to adolescent medicine. And his work was frequently cited in the bibliographies of other writers on pediatric subjects. At one time he was pediatric consultant for *Dorland's Medical Dictionary.*

Carl Fischer's honors include the Hahnemann "Alumnus of the Year" accolade in 1963, and the Hahnemann Corporation medal in 1969. On his academic retirement, a group of his colleagues endowed the annual Carl C. Fischer Lectureship, the first of which was held in 1968 at the College of Physicians of Philadelphia. On the occasion of his eightieth birthday, he was particularly pleased by the dedication to him of the Carl C. Fischer, M.D., Neonatal Intensive Care Unit at Hahnemann University Hospital.

In addition to services held at Delray Beach, Florida, on 28 December 1989, a memorial service was held at Hahnemann University on 26 January 1990. Fischer's longtime friend and colleague, Horst Agerty, M.D., professor emeritus of clinical pediatrics, officiated.

Carl Fischer possessed both an exceptionally keen intellect and a personality that was magically filled with the boundless humanity of a born physician; he also had very good fortune. Early in his internship at Hahnemann, Fischer was assigned to a ward in the charge of Mary A. Charles, R.N., whose duties included instructing new interns in the routines of patient care. Mary Charles found him a rather indifferent student on this occasion, but he was very

1. Carl Castle Fischer, *The Role of the Physician in Environmental Pediatrics* (New York: Landsberger Medical Books, 1960).

attentive to *her*; and they were married the following year. If it were not for this warm-hearted, gracious woman — a humanitarian in her own right — the chronicle of Carl Fischer's achievements would have been predictably shorter.

In addition to his wife Mae, as she is known to friends, survivors include their daughter, Mrs. Elaine Marshack; two sons, Charles T. and John W.; and five grandchildren. All of them have our deepest sympathy in the loss of Carl Castle Fischer, as we recall, again from the parable, the reward of the ten-talent servant: "Enter thou into the joy of thy lord."

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Transactions & Studies of the College of Physicians of Philadelphia (ISSN 0010-1087) is published four times a year (March, June, September, December) by the College of Physicians of Philadelphia, 19 South 22nd Street, Philadelphia, PA 19103. Second-class postage paid at Philadelphia, PA 19104. POSTMASTER: Send address changes to *Transactions & Studies of the College of Physicians of Philadelphia,* 19 South 22nd Street, Philadelphia, PA 19103.

Subscription correspondence should be sent to the journal at the same address. Subscriptions, U.S.A. and Canada $35.00, foreign $40.00. Single copies, $10.00.

Transactions & Studies of the College of Physicians of Philadelphia is indexed in *Biological Abstracts, Chemical Abstracts,* and *Index Medicus.*

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OF THE
COLLEGE OF PHYSICIANS OF PHILADELPHIA

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Series V Volume XII No. 3 SEPTEMBER 1990

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MEDICINE & HISTORY

Series V Volume XII Number 3 September 1990

Acknowledgments

The publication of this issue of *Transactions & Studies of the College of Physicians of Philadelphia* is made possible through the generosity of:

The M. Louise Carpenter Gloeckner Memorial Fund

The Morris Feld Memorial Fund

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HOWARD STEEL, M.D. is the emeritus chief surgeon at Shriners Hospital for Crippled Children, professor of orthopaedic surgery at Temple University Medical Center, and clinical professor of orthopaedics at the Medical College of Pennsylvania. A Fellow of the College of Physicians of Philadelphia since 1955, his major publications and field of interest have been in pediatric orthopaedic surgery.

JANET TIGHE, Ph.D. teaches in the American Civilization Department at the University of Pennsylvania. She has published previously on the relationship between law and medicine in the United States, and on American medical education. At present, she is completing a history of the Temple University School of Medicine.

Correspondence

[The following letter was received by Nancy Juergens, in response to her article, "An Exhibit on Schizophrenia at the College of Physicians of Philadelphia," in the March, 1990, number of *Transactions & Studies of the College of Physicians of Philadelphia*. Dr. Cobb, who is editor emeritus of the *Journal of the National Medical Association*, has been a Fellow of the College of Physicians of Philadelphia since 1976.]

Dear Ms. Juergens:

I write to congratulate you on the excellence of your article. It happens that I knew both Dr. Freeman and Dr. Watts. Dr. Dandy, who was associated with them, I never got to know.

Dr. Freeman gave a featured lecture of the Medico-Chirurgical Society of the District of Columbia in the early years of our series.

On a skull from our dissecting room, I showed students what a lobotomy was like, but of course, I did not have Dr. Freeman's instruments to illustrate. All the controversy that transpired over lobotomy I remember well.

You will sense the depth of my appreciation of your contribution.

With every good wish.

Ever sincerely,

W. Montague Cobb, M.D.
11 April 1990

Transactions & Studies of the College of Physicians of Philadelphia Ser. 5, Vol. 12, No. 3 (1990); 305-305
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Editorial

This special issue of the *Transactions & Studies* is devoted to recent work on the history of Philadelphia medicine and health care. Together, the articles that follow demonstrate how rich a history can be composed from the record of our local institutions and their leaders. In recent years, historians have struggled to strike the proper balance between national themes and regional variations. At one level, the history of modern medicine is necessarily national, indeed international, in scope. Over the course of the nineteenth century, medical science became increasingly uniform and interdependent; events taking place in German laboratories in the 1880s, for example, had an immediate and profound impact on physician-scientists throughout the world. At the same time, the practice of medicine remained bound to the diverse communities in which physicians practiced. Regional and national differences in therapeutic style persisted (and persist to this day) despite the growing uniformity of scientific medicine. Thus, writing the history of American medicine involves maintaining a constant balance between general trends and their many variations.

The articles in this issue of the *Transactions & Studies* show how Philadelphia case histories can be used to broaden the main lines of American medical history. Janet Tighe's article on the Temple University School of Medicine provides a valuable corrective to the tendency to write the history of medical education from the standpoint of only a handful of elite medical schools. In its early years, Temple's "midnight medical school" offered an opportunity for upwardly mobile young men to get a medical education. Its mission to be the "working man's medical college" ran afoul of the increasing impetus to standardize medical education, which used the Johns Hopkins Medical School and other elite institutions as yardsticks of excellence. Abraham Flexner declared confidently in his famous 1910 report on medical education that the Temple school had "absolutely no future."

But as Tighe shows, while the Temple administration worked long and hard to meet the standards of the American Medical Association, it never conformed to the ideal medical school. Tighe concludes, "For every Johns Hopkins and Washington University that had fulfilled reformers' dreams and taken its place in Flexner's

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modern medical education system, there were five medical schools like Temple which were still struggling to implement new ideas . . . Learning more about these schools in transition may reveal that not only was Flexner wrong about Temple's future, but about the shape that the modern university medical school ultimately assumed."

In "William Scott Wadsworth: An Appreciation of an Anomalous Career," Julie Johnson uses the biography of William Scott Wadsworth to reflect on another variation in the mainstream history of medical thought. This physician possessed the education and the social connections to join Philadelphia's medical elite, yet he chose instead the quirky path of forensic pathology, which was just emerging as a medical specialty. In Wadsworth's view, the new ideal of laboratory medicine failed to encompass "the true composite nature . . . of medical thought." He preferred the challenge of the post-mortem diagnosis, which called upon the full range of a physician's investigative abilities. Forensic pathology also allowed Wadsworth to serve the state in a manner he found very satisfying. "To one who thought much about the civic responsibilities of the medical profession, his work offered intellectual stimulation coupled with a sense of duty fulfilled," Johnson writes.

By seeking to involve themselves more fully in the courtroom, forensic pathologists such as Wadsworth followed a trajectory quite unlike the medical profession as a whole, which tried to avoid the legal arena. The physician's performance as an "expert witness" inevitably revealed the tension between medical and legal standards of proof. "Legal procedure offered an affront not only to their expertise, but also provided a public forum for dissent which, many physicians felt, harmed the medical profession's efforts to forge a collective identity." By becoming adept at the role of the medico-legal expert, William Scott Wadsworth chose a different route, and his biography provides a fascinating counterpoint to the better-known sagas of medicine's growing confidence in the clinic and the laboratory.

Patricia D'Antonio offers a third Philadelphia variation on a standard historical theme: the concept of the mental hospital as a radical new form of treatment in the early nineteenth century. Using the extensive archives of the Friends Asylum, which opened in 1817, D'Antonio shows how deeply the early institution was shaped by the family and friends of patients. The Asylum was an extension of traditional Quaker means of caring for the mentally ill, such as boarding them with other Quaker families. The Asylum's lay staff

sought to support rather than supplant the family's own efforts to aid the patient. "Families chose asylum care because of its familiarity to the extended kin and social community they themselves might have provided at home," writes D'Antonio.

The close involvement of kinfolk in the Asylum's affairs had its disadvantages, however. The Asylum staff claimed a form of expertise that often conflicted with the family's more personalized vision of treatment. Staff and family frequently disagreed over how often a patient should be visited, when a patient was ready to go home, and similar matters of institutional protocol. "In an era when personal knowledge carried more authority than lay claims of expertise, the authority vested in the superintendents, as head of the Asylum's 'family,' paled in comparison with that of the patient's immediate family." D'Antonio has identified one of the chief reasons that asylum treatment became more "medicalized" over the course of the nineteenth century. As physicians gained more moral and scientific authority within the asylum, they gradually relegated the family to a more subsidiary role in treatment. The end result was a better-ordered but more impersonal, and probably less effective, institution.

Two other contributions to this issue of the *Transactions & Studies* illustrate the richness of Philadelphia's archives of medical history. Thomas Horrocks and Jack Eckert have edited a series of letters from the Historical Collections of the College of Physicians. The correspondence between David William Lewis, a medical student at Jefferson Medical College, and his "Dearest Maria," provide a revealing glimpse of how one young physician-in-the-making viewed his world of professors and fellow students. A striking aspect of the correspondence is Lewis's religiosity and his frequent references to death. The letters begin by noting the funeral of a fellow Jefferson student (for which both the Jefferson and University of Pennsylvania medical schools closed, suggesting to Horrocks and Eckert that the two schools' rivalry was not unrelievedly bitter); and conclude, in the next to last letter, with Lewis's observation, "Truly, in the midst of life we are in death." When death was still so unpredictable, the physician's training in religious and spiritual matters was perhaps one of his most valuable professional assets.

Janet Golden has prepared a useful guide to the photographic legacy of Philadelphia medicine to be found in the city's many historical archives. Her listing concentrates on the period prior to 1945, and emphasizes the photographic record of the day-to-day

world of health care, rather than likenesses of famous nurses and physicians. No doubt Golden's guide will contribute a wealth of fine illustrations to future issues of the *Transactions & Studies* and other medical history publications.

This will be my last issue as editor of the *Transactions & Studies of the College of Physicians of Philadelphia*, and I want to take the opportunity to thank all those people who have helped make my year in charge of its pages so rewarding. Special thanks go to: L. Cathryne Foedisch, Jack Eckert, Thomas Horrocks, Diana Long, John McClenahan, Ted Ricker and his staff at the Winchell Company, Fred Rogers, Charles Rosenberg, Sarah Tracy, and Gretchen Worden. Last but not least, I want to thank Carla Cohen Jacobs for her excellent job as editorial assistant, and as of July 1, managing editor, of the *Transactions & Studies*.

Never Knowing One's Place: Temple University School of Medicine and the Medical Education Hierarchy

JANET TIGHE

Every institution has its store of dramatic tales that defy historians' abilities to verify their accuracy, and Temple University School of Medicine is no exception. One of the most colorful stories about the medical school concerns its founding. According to this legend, four young men — two Italians, a Jew and a black man — approached the President of Temple College, Reverend Russell Conwell, with a plea for help to attend medical school. Although Temple had no medical department at this time, Conwell was an appropriate target for such a request. A self-made man who had struggled to acquire his own education, Conwell had long been interested in expanding the educational opportunities available to America's laboring classes. In fact, he had acquired a national reputation as an orator for a speech he gave on this topic. In his famous "Acres of Diamonds" speech, Conwell exhorted Americans to look for the "riches" that exist "Right where you live." Conwell himself strove to fulfill this mission through the college he had established in North Philadelphia. The purpose of Temple College, wrote Conwell, was to give

> all classes the opportunity to rise from the middle, or even the most ignorant ranks of society, to the highest intellectual plane; and fit them to meet financial, moral and social responsibility, as real benefactors of mankind.[1]

The four would-be medical students at the center of Temple's founding legend were seeking just such an opportunity. These men did not lack intellectual ability, according to the legend, only the

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A previous version of this paper was presented at a meeting of the Section on Medical History of the College of Physicians of Philadelphia on 15 November 1989.

1. Agnes Burr, *Russell H. Conwell and His Work* (Philadelphia: John H. Winston Co., 1917); Russell Conwell, *Acres of Diamonds* (Kansas City, MO: Hallmark Cards, 1968). Carolyn Eberwein, "Tall Oaks From Little Acorns Grow," *The Temple Review,* 1956, 6; J. Douglas Perry, "Incredible University: A Story of Temple," (Unpubl. manuscript, Templana Collection, Temple University).

Transactions & Studies of the College of Physicians of Philadelphia Ser. 5, Vol. 12, No. 3 (1990); 311-334
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financial resources needed to attend any of Philadelphia's existing medical schools. At that time, the city boasted five medical schools — the University of Pennsylvania, Thomas Jefferson University, Hahnemann, Medico-Chiurgical, and the Woman's Medical College of Pennsylvania. Unfortunately for the students who approached Conwell, and for many others in the United States in the first half of the twentieth century, most of these institutions were not only expensive, but they also adhered to an unspoken, extremely strong discriminatory code. Those who found it difficult to enter medical school in the early twentieth century included women, blacks, and most late nineteenth- early twentieth-century immigrant groups, as well as anyone who had to work while attending school.[2] This type of discrimination was exactly what Conwell wanted to eliminate. According to the legend, after hearing the plight of the four would-be doctors, Conwell decided to create a new "workingman's medical college." This medical college for the "common man" was to be a "night school," open to all regardless of race, color, creed, or gender. It was to have a modest tuition and a schedule flexible enough to accommodate students with daytime employment.[3]

Temple's "midnight" medical school, as it came to be known, began operation in the Fall of 1901. Its early student population was small, but contained representatives from all of the groups excluded from the more traditional medical schools. This unusual

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2. Perry, "Incredible University," Chap. 7, pp. 3–8; Chap. 8, pp. 3–4; Chap. 11, pp. 3–4; I. N. Snively, "The Medical Department," in *Founder's Week Memorial,* Frederick Henry, ed., (Philadelphia: City of Philadelphia, 1909), p. 345. The historical literature on the quota systems operating in American medical schools is voluminous. Some of the most helpful discussions include: Daniel Fox, "Abraham Flexner's Unpublished Report: Foundations and Medical Education, 1909–1928," *Bulletin of the History of Medicine,* 1980, *54*:482, 490; Saul Jarcho, "Medical Education in the United States, 1910–1945," *Journal of the Mount Sinai Hospital,* 1959, *26*:357–359; Stephen Kunitz, "Professionalism and Social Control in the Progressive Era: The Case of the Flexner Report," *Soc. Probs. Journal,* 1975, *22*:16–17, 20–24; Kenneth Ludmerer, *Learning to Heal* (New York: Basic Books, 1985), pp. 182–183, 247–248; Gerald Markowitz and David Rosner, "Doctors in Crisis: A Study of the Use of Medical Education Reform to Establish Modern Professional Elitism in Medicine," *American Quarterly,* 1973, *25*:95–97; George Rosen, *The Structure of American Medical Practice: 1875–1941* (Philadelphia: University of Pennsylvania Press, 1983), pp. 68–69; Mary Roth Walsh, *"Doctors Wanted: Women Need Not Apply": Sexual Barriers in the Medical Profession 1835–1975* (New Haven: Yale University Press, 1979).

3. Perry, "Incredible University." Chap. 8, pp. 3–4; also consult the *Temple University School of Medicine Catalogs,* particularly for the years 1901–1909 (hereafter cited as *TUSM Cat.*).

Figure 1. Early anatomy laboratory at Temple University School of Medicine, circa 1900.
Courtesy of the Conwellana-Templana Collection/University Archives, Temple University Libraries.

collection of students was instructed by an equally unconventional group of private practitioners who taught medicine in their spare time. Neither students nor professors led a very comfortable existence. They were, for example, forced to share classroom and laboratory space with Temple College undergraduates. They even had to conduct their anatomical dissections in a loft above a stable (See Fig. 1).[4] Temple's medical faculty and students were also subject to a great deal of public criticism. If these indignities were not enough, one of Pennsylvania's leading medical journals published an especially biting editorial about the school. The editor wrote:

> We cannot but express ourselves, as convinced of the lack of wisdom in establishing this [night medical school] . . . The argument that such an institution will be of advantage to a group of poor young men who seek to acquire medical education is hardly tenable . . . all great schools provide scholarships for the worthy . . . we think that the standing of the medical profession today demands absolutely all of the student's time

4. Perry, "Incredible University," Chap. 8, pp. 4–6; Faculty Minutes 11 September 1901–19 October 1909, Temple University Medical Department, Templana Collection, Temple University (hereafter cited as Fac. Min.); *TUSM Cat.*, 1901–1910, especially 1901, 1903, and 1905.

> during his course; that it should be the whole object of these years of his life and not a side issue.[5]

The editorial ended with a plea for Temple to reconsider and not "cheapen the medical degree."

Such attitudes and conditions prevailed when, in 1909, representatives of the American Medical Association's (AMA) Council on Medical Education and the Carnegie Foundation conducted the first major survey of American medical schools. Like many of the schools evaluated in this study, Temple received a highly unfavorable report. The survey's author, Carnegie Foundation representative Abraham Flexner, used scathing language in his description of Temple. Describing Temple as a school lacking in most of the basics necessary for medical education, Flexner declared with great finality that the school had "absolutely no future." In Flexner's estimation, there was no place for the working man's medical college in the "modern" medical education system that he and his fellow reformers were creating in the United States.[6]

Flexner's criticisms of Temple, which were followed by 30 years of negative evaluations from various national bodies organized to police medical education, suggest that the medical school had a difficult time keeping up with the reformist trends in early twentieth-century American medicine. To put the matter more simply, for the first few decades of its existence, Temple Medical School was a "little different," in the words of one early alumnist.[7] The purpose of this essay is to explore just what this difference meant for Temple's medical students and for the American medical education system in general. Such an analysis of Temple's experience also casts some

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5. Editorial, "A New Night Medical School," *Interstate Medical Journal,* 1901, *8*:533–534.

6. Abraham Flexner, *Medical Education in the United States and Canada* (New York: Carnegie Foundation, 1910), pp. 295, 299–300. There is an extensive literature on the significance of the Flexner report. The sources that I found helpful in analyzing Temple's situation include: H. D. Banta, "Medical Education: Abraham Flexner, A Larger Perspective," *Inter. Journal Health Services,* 1975, *5*:573–592; Fox, "Flexner's Unpublished Report," pp. 475–496; Robert Hudson, "Abraham Flexner in Perspective: American Medical Education, 1865–1910," in *Sickness and Health in America,* Judith Leavitt and Ronald Numbers, eds., (Madison, WI: University of Wisconsin Press, 1978), pp. 105–115; Martin Kaufman, *American Medical Education* (Westport, CT: Greenwood Press, 1976), pp. 164–182; Kunitz, "Professionalism and Social Control," pp. 16–27; Ludmerer, *Learning to Heal,* pp. 166–190.

7. Emmanuel Weinberger, interview with author, 11 September 1985.

light on aspects of the reform process that have been neglected by historians of medical education.

One important aspect of this reform process is the changing nature of the relationship between Temple and outside medical education authorities, particularly the AMA's Council on Medical Education. In the early years of this century, many Temple faculty members regarded the AMA with suspicion and agreed with Professor Charles Sajous's characterization of its reform program as a "killing process" that threatened Temple's very existence.[8] Twenty years of dealing with the AMA did little to change the minds of Temple faculty. Most of these physicians heartily agreed with the school's third dean, Frank C. Hammond, when he commented wearily in 1912, "that it does not matter what we do, we never seem to fill the bill. There is always something still needed to suit the AMA Council."[9] By 1950, however, reform had become a much less frightening experience for Temple, involving negotiation and compromise with a powerful, but not hostile outside authority.[10]

This study of medical education reform at Temple owes much to the work of physician-historian Kenneth Ludmerer. Ludmerer's book, *Learning to Heal,* is an insightful account of the development of American medical schools in the years between 1870 and 1930. In his book, Ludmerer broke with the pattern set by earlier historians of medical education who based their studies primarily on material found in the reports of national authorities like the AMA and the Association of American Medical Colleges (AAMC). Instead of relying on the reports of these third parties, Ludmerer turned to the records kept by the medical schools themselves. With this strategy, he uncovered a wealth of new information about the teaching of medicine in the United States.[11]

Unfortunately for other historians including myself, many schools, particularly the smaller, poorer, and less prestigious ones like Temple, had little sense of their own significance and the importance of preserving their records. The schools that did preserve historical materials and whose experiences provide the basis for

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8. 18 September 1912, Louis Sajous to Laura Carnell, Sajous Papers, Templana Collection, Temple University, (hereafter cited as Sajous Papers).

9. 19 April 1912, Frank C. Hammond to Medical School Faculty, Sajous Papers.

10. Donald Anderson and Dean Smiley, "Survey of Temple University School of Medicine, Philadelphia, February 19–24, 1950," Temple University School of Medicine Papers, Templana Collection (hereafter cited as TUSM Papers).

11. Ludmerer, *Learning to Heal,* pp. xi–xii, 3–28, 238–242.

most of what we know about American medical education in the twentieth century were elite institutions like Harvard, Johns Hopkins, and Washington University. Even Ludmerer's book, which attempted consciously to broaden the field of study, is focused mainly on the upper end of the AMA's hierarchy of medical schools.[12] This focus has left the stories of a great number of less prestigious medical schools out of the history of American medical education. Historians and others interested in past patterns of medical education in the United States have assumed that these schools shared their elite counterparts' values and experiences without having any real sense of what was going on in them. An examination of the history of the Temple University School of Medicine makes it clear that such an assumption is not always well founded.

The main focus of analysis here is Temple's development in the years between its founding in 1901 and the Second World War. After World War II, Temple, and indeed much of the American medical education system, were altered fundamentally by such sweeping forces of change as the expansion of the federal government's role in health care delivery and biomedical research; the rapid introduction of a host of new diagnostic and treatment technologies; the enlargement of the role of third party payers in American medical economics; and the growing conviction on the part of many Americans that access to adequate health services is a right to which all citizens are entitled. These forces of change have received much scholarly attention, as have the reform impulses of early twentieth-century medical educators.[13] The years between these two periods have not been examined with such care. When medical historians do discuss the period from 1920 to 1950, it is usually in terms of the triumph of the educational model advanced by Flexner and his fellow reformers. According to this view, the "modern university medical school" described by Flexner and other reform advocates had become a reality in the United States by

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12. Fox, "Flexner's Unpublished Report," pp. 482, 490; Kunitz, "Professionalism and Social Control," pp. 16–17, 20–24; Ludmerer, *Learning to Heal,* pp. 182–183, 247–248; Markowitz and Rosner, "Doctors in Crisis," pp. 95–97, 105–106; Rosen, *Structure of Medical Practice,* pp. 68–69.

13. Daniel Fox, *Health Policies, Health Politics* (Princeton, NJ: Princeton University Press, 1986); Jarcho, "Medical Education," pp. 339–385; William Rothstein, *American Medical Schools and the Practice of Medicine* (New York: Oxford University Press, 1987); Paul Starr, *The Social Transformation of Medicine* (New York: Basic Books, 1982); Rosemary Stevens, *In Sickness and in Wealth* (New York: Basic Books, 1989).

1930.[14] The records of Temple for this period make it clear that this medical school did not fit the norm. While the reform standards established by Flexner were a central concern for Temple during these years, it had not yet become a modern university medical school.

To understand how Temple differed from reformers' ideals, it is necessary first to establish the yardsticks being used by the AMA, the AAMC, and other policing bodies to measure the quality of medical education. The ideal school sought by these medical education "police" was a university-affiliated institution with substantial economic resources. Classes in the modern university medical school were conducted by a full-time faculty of professional academics whose belief in the power of science and research dominated their teaching of all subjects, including clinical medicine. This school had control of its own hospital — a hospital that contained a large number and wide variety of patients who were available for teaching purposes. The ideal hospital also gave its students access to the latest technological innovations and to physicians able to teach a broad spectrum of medical specialties.[15]

This picture of high-powered academic physicians, a tightly controlled teaching hospital, and a well-articulated research agenda bears little resemblance to the medical school operating at Temple in the 1920s, the 1930s, and even the 1940s. At Temple, private practitioners held considerable power, the role of research was highly problematic, and clinical education took place in a hospital where the demands of community service often took precedence over teaching. These discrepancies do not mean that Temple was somehow excluded from the list of America's approved medical schools. On the contrary, it was a member in good standing of all the accrediting bodies and did, at least rhetorically, share their values and aspire to fulfill their expectations. Moreover, Temple's students regularly passed the various state licensing examinations and joined the ranks of America's practicing physicians. Yet, for more than 30 years medical education at Temple was conducted in an environment quite different from the one advocated by authorities in the field. To understand how Temple could be both an "ap-

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14. Ludmerer, *Learning to Heal*, pp. 243–245; Markowitz and Rosner, "Doctors in Crisis," pp. 95–97.

15. Carleton Chapman, "The *Flexner Report* by Abraham Flexner," *Daedalus*, 1974, *103*:107–109, 112–115; Fox, "Flexner's Unpublished Report," pp. 475–479, 494; Ludmerer, *Learning to Heal*, pp. 5, 234–238, 241, 249–251, 257–258.

proved" medical school and a "little different," it is important to examine the factors that shaped the school's ability to respond to reform recommendations.[16]

Financial considerations were by far the most powerful factors shaping Temple's responses for the simple reason that medical education reform was expensive and Temple was poor. Acquiring the physical plant, teachers, and equipment mandated by national standards required a major investment of funds, which had to come from a variety of sources. The sources most commonly used by Temple's more successful counterparts included well endowed parent universities, medical philanthropists like the Rockefellers, and state and local governments.[17] Unfortunately for Temple, it did not have a financially strong parent university or the ability to attract support from any of the larger medical philanthropies. The school was more fortunate in its relationship with the state and a few local charities, but the money from these sources was always subject to the flux of politics and competition from other Pennsylvania medical facilities. As a result, Temple always had to husband its resources carefully.[18]

Lack of reliable external funding meant that Temple was heavily reliant on its own ability to make money through medical school tuitions, alumni donations, and the income from the hospital's patients; funds that were every bit as problematic as government monies. In an institution that was founded as the "working-man's medical school," there was always a struggle to keep tuition and fees low. This same constraint affected the amount that alumni could be relied on to contribute, since the vast majority were general practitioners making a modest living. The hospital's original identity

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16. Anderson and Smiley, "Survey of Temple University School of Medicine"; see also the reports compiled yearly by the AMA's Council on Medical Education which appear in the *Journal of the American Medical Association* annually from 1914 to the present.

17. Howard S. Berliner, "AMA-Carnegie Foundation Background on the Flexner's Report," *Bulletin History Medicine,* 1977, *51*:606; Fox, "Flexner's Unpublished Report," pp. 483–488; Ludmerer, *Learning to Heal,* pp. 139, 268–272. Markowitz and Rosner, "Doctors in Crisis," p. 99.

18. The most concise statement of the medical school's financial position can be found in "Statement of Dr. William Parkinson to the Special Investigation Committee of the Board of Trustees of Temple University," (November 1940), pp. 1–23. For information about the funding of medical institutions by the state of Pennsylvania consult Rosemary Stevens: "'A Poor Sort of Memory': Voluntary Hospitals and Government Before the Great Depression," *Health and Society,* 1982, *60*:551–584 and "Sweet Charity: State Aid to Hospitals in Pennsylvania: 1870–1910," *Bulletin History Medicine,* 1984, *58*:287–314, 474–495.

as a charity institution placed similar limitations on its capacity for generating funds. These constraints on the hospital operated until its board made a concerted effort in the 1930s to increase the percentage of pay patients and turn it from a charity hospital into a community one. But even after the hospital began to show a more healthy income, it was still an unreliable source of funds for medical education. The hospital never produced much surplus capital since it continued to provide a significant amount of indigent care. This source of income was also greatly dependent on the good will of private practitioners who were the ones who brought patients to the hospital. If the private practitioner chose to take his or her pay patients elsewhere, Temple's income suffered, as hospital director William Parkinson observed in the mid-1930s, when he chided the staff for sending only charity cases to Temple. Thus hospital income shared with government aid the characteristic of being only partially within the control of the medical school.

Even after a strenuous effort to enlarge the institution's endowment, Temple's financial base remained shaky. Financial insecurity forced the school into some unorthodox compromises as it struggled to implement the recommendations of medical education authorities.[19] The first focus of compromise was the "democratic" philosophy that had inspired Temple's founding. Not only was Conwell's dream of a medical school for the common man an overwhelming financial burden for Temple, but it had a tendency to put the school at odds with national medical authorities. Temple's democratic philosophy stimulated conflict with these officials because of the inherent elitism that suffused the standards they applied to American medical education. Although historians are still debating whether the elitism imbedded in reformers' efforts to raise medical education standards was deliberate or inadvertent, there is little dispute that many of these reforms "impeded the entry of disadvantaged youths into the profession."[20] For example, raising admission standards greatly increased the time and money a student needed to complete a pre-medical school program. Lengthening the medical school year, and increasing the amount of required laboratory work had a similar effect on a student's time. Students like those at Temple, with few economic resources other than their own labor, often could not support these additional demands on their time and money. Temple

19. Ibid.
20. See note 12 above.

faculty faced a difficult choice. Acceptance of national standards was the only way Temple was going to achieve a secure place in the American medical education system. Yet, the closer Temple came to securing this place, the more difficult it became to serve the students for whom it had been created.[21]

Temple's faculty and administration were forced very early to confront the conflict between their own "democratic" philosophy and the elitism in national standards. In 1903, AMA president John Shaw Billings made a special point to denounce night schools like Temple in his annual address. His objections included doubts as to whether the individuals served by these "sundown institutions" — "the clerk, the streetcar conductor, the janitor and others employed during the day" — were suitable material for the medical profession.[22] Billing's speech and other actions by medical education authorities, particularly the AAMC's decision to refuse membership to all schools with night schedules, forced Temple officials to reconsider their position. Debate among Temple medical school faculty raged for several years with criticism of the evening schedule continuing to mount. By 1907 the Pennsylvania Medical Council, various state licensing boards and the AMA had joined the AAMC in urging Temple to give up their evening operation. Most of Temple's faculty were willing to make the change by this time. But a few influential members of the university community, namely Dr. Albert Robin of the medical faculty and university president Russell Conwell, were not convinced. Robin, Conwell, and their supporters feared that abandoning the night school would mean that Temple was turning its back on the very group it was created to educate — the poorer, working student. Only after several state licensing boards, including Pennsylvania's, refused to let Temple graduates even take their examinations did the champions of the night school agree to its demise. Temple's medical evening classes were gradually discontinued and, in 1911, America's last night medical college disappeared.[23]

The termination of Temple's night classes did not end the school's commitment to students from the "humbler walks of life" or its policy of being open to all races, colors, genders, and creeds,

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21. The debate that accompanied the faculty's 1907 decision to convert from a night school to a day program demonstrates the problematic nature of their choice. For more information about this debate, see: Fac. Min. 21 June 1907 and 15 February 1909; and Perry, "Incredible University," Chap. 8, pp. 7–8.

22. John Shaw Billings, "Medical Education," *Science,* 1903, *17*:763.

23. See note 21 above.

but it did signal the beginning of a subtle change. In the second quarter of the twentieth century, Temple's student profile began to bear an increasing resemblance to the national one, including its unspoken quota system for limiting the numbers of women, blacks, and certain ethnic minorities. Slowly the number of individuals from these groups began to decrease until they had by the late 1930s become only a small portion of Temple's student body. This change in the composition of Temple's student population makes it evident that although there was no alteration in the school's official position, there was an important modification in its spirit.[24]

One of the most powerful forces in the modification of Conwell's promise of educational opportunity was the man who in 1929 became dean of the medical school and director of the hospital — William Parkinson (See Fig. 2). In his capacity as dean, Parkinson made almost all of the admissions decisions until well after the Second World War. Remaining true to Conwell's dream of offering educational opportunity to the disadvantaged was important to Parkinson, for he himself had benefitted from such an opportunity. But Parkinson, who had been brought in as dean in order to implement a major reform campaign, was also committed to bringing Temple into compliance with AMA guidelines, including the more stringent admissions standards. These guidelines and his own prejudices led Parkinson to reinterpret Conwell's promise of educational opportunity. There was, for example, little attention paid to the plight of women, blacks, and ethnic minorities such as Jews who faced stringent quotas when applying to medical school. From Temple's student records, it is evident that Parkinson was more than willing to go along with the national system of discrimination against these groups.[25]

Parkinson's failure to sustain this part of Conwell's vision did not mean that he abandoned all of it. For Parkinson, the most

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24. The changes in the profile of Temple's student body can be seen in information contained in *TUSM Cat.*, 1920–1950. Also see remarks in the Major Faculty Minutes, 14 January 1938 and 16 April 1943, Temple University School of Medicine Papers, Temple University School of Medicine (hereafter cited as the Major Fac. Min.).

25. William Parkinson, "A Philosophy of Medicine," *Temple University Medical Center Bulletin*, 1955, *2*:8–10; also see remarks by Parkinson published in the medical school's yearbook, *Skull*, 1926, pp. 35–36; *Skull*, 1932, p. 1; *Skull*, 1935, p. 266; Douglas Perry, "Dean William Parkinson, Tough and Unforgettable," *Temple University Medical Center Bulletin*, 1976, *4*:4–14 Louis Tuft, "Temple Medical School in the Parkinson Era — Some Recollections," *Temple University Medical Bulletin*, 1977, *5*:6–13.

Figure 2. William Parkinson, M.D., Dean of the Temple University School of Medicine from 1929–1959.
Courtesy of the Conwellana-Templana Collection/University Archives, Temple University Libraries.

important part of Conwell's plan was the effort to keep medical education affordable by the average middle-class American family. When Parkinson began his tenure as dean, he tried to do this by keeping Temple's tuition below that of Pennsylvania's five other medical schools, but steeply rising costs made this impossible. By 1935, Temple students were paying tuition and fees comparable to those paid by students in Pennsylvania's other schools of medicine. Parkinson tried to lessen the impact of this tuition increase and keep the school within the reach of the "middling classes" by functioning as a kind of informal financial aid officer. From a desk drawer that has become legendary among Temple alumni, Parkinson would pull out checks and endorse them over to students he deemed worthy. In addition to doling out checks from loyal alumni and grateful patients, Parkinson proved adept at finding part-time jobs for students in financial trouble. In this ad-hoc and paternalistic

fashion, Parkinson tried to fulfill Conwell's promise to broaden medical education opportunities.[26]

Parkinson's reinterpretation of Conwell's educational design was only one of the ways in which he influenced Temple's struggle to become a modern university medical school. His tenure as dean and medical director is best described as a "benign dictatorship." During most of the years from 1929 to 1961, when Parkinson was in power, he was the ultimate authority in all institutional matters, including student admissions, finances, and faculty recruitment. Although Parkinson was not solely responsible for the shape that Temple assumed during his years as dean, he was the single most important decision-maker in three areas that were of great concern to medical education reformers — research, faculty composition, and clinical teaching. It is therefore crucial to an understanding of Temple's evolution to have some sense of Parkinson's beliefs and values.[27]

Parkinson's plan for medical education at Temple grew out of both his own pedagogical experiences and his response to the guidelines being established by the AMA and the AAMC. A 1911 graduate of Temple, Parkinson had attended the institution during the difficult early years of the day school. Attending medical school when old-fashioned lecture methods prevailed, Parkinson's laboratory exposure was minimal and most of his clinical experience was gained after graduation. Like many of his contemporaries, Parkinson learned his specialty, surgery, by serving an informal postgraduate apprenticeship in community hospitals. Several years' experience in a surgical field hospital during World War I and an additional year of study in several European clinics completed his training. Out of these experiences, Parkinson developed a profound respect for "hands on" clinical training. Advising his faculty against a too heavy reliance on lectures and passive learning, he reminded them that medical students could read and should be spending their valuable school time with patients, not in the lecture hall.

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26. *Annual Reports of the Temple University Hospital*, 1931–1937, TUSM Papers, Temple University School of Medicine (hereafter cited as *Annual Reports*); Parkinson, "Statement," pp. 1–23; Perry, "Dean Parkinson," pp. 7–8. Relevant information was also received during interviews with the following: Taylor Caswell, 16 September 1985; George Stewart, 21 October 1985 and 18 November 1985; Louis Tuft, 15 October 1985; Emmanuel Weinberger, 11 September 1985.

27. Parkinson, "Statement," pp. 1–23; Perry, "Dean Parkinson," pp. 4–9; Major Fac. Min. also throw some light on Parkinson's management style, especially 16 June 1938, 29 April 1938, and 15 July 1938.

Parkinson's years as a combination general practitioner and general surgeon had also convinced him that medical students, whether they go on to specialty training or not, should first acquire the skills of a good general practitioner. While not opposed to the growing specialization among American physicians, he believed the role of the Temple medical school was to train physicians who had the observational skills and deep understanding of human nature that he saw in a good general practitioner.[28]

The guidelines provided by the new guardians of medical education — the AMA and the AAMC — fit, to a large degree, with Parkinson's views. Yet, it is important to realize that the plans of these policing organizations went a bit farther then Parkinson's plan to create an institution for producing well-trained general practitioners. One of the biggest differences between Parkinson's educational approach and that of national medical education authorities was their attitude toward research. Research and the laboratory played a pivotal role in the educational model advanced by the AMA and AAMC. In this educational model, medical teaching and research were inextricably linked as two parts of a single process. To the leadership in these organizations, there could be no high quality medical teaching without a research program that was firmly established in all departments and fully integrated into the entire curriculum. The cost of such a program — a cost that was considerable — was something medical authorities believed simply had to be borne if a school was to remain part of the American medical education system.[29]

Perhaps because his own formal medical training and private practice career contained little laboratory experience, Parkinson developed a different attitude toward research. For him, laboratory research had an important, but not central role in the training of good physicians. Parkinson saw medical experimentation as a positive activity that could certainly enhance the school's reputation, but one that was nonetheless something of a luxury. A school that was first and foremost an educational institution for general practitioners, and second a health care provider for its community could ill afford the luxury of a basic research program. Although the institution became far more comfortable financially in the course

28. Parkinson, "Philosophy of Medicine," pp. 8–10 and his remarks in *Skull,* 1926, pp. 35–36; *Skull,* 1932, p. 1; *Skull,* 1935, p. 266; Perry, "Dean Parkinson," pp. 4–14; Tuft, "Temple Medical School," pp. 6–13.

29. Ludmerer, *Learning to Heal,* pp. 7, 102–108, 139–141, 263–266.

of Parkinson's tenure, he believed there was little money that could be invested in research. This did not mean that Parkinson discouraged faculty who were interested in pursuing a research project; it only meant that he would not pay for it. Parkinson did make limited amounts of space available for research laboratories and hired a few assistants to release faculty from some of their teaching burdens, but until the changes in the research climate stimulated by World War II, Parkinson would not use institutional funds to underwrite research costs.[30]

Because of Parkinson's attitude, research at Temple in the pre-World War II period remained largely a matter of an individual doctor's initiative. If a physician could secure outside funds to support his or her experiments while maintaining a level of teaching and patient care that Parkinson found satisfactory, then that faculty member could indulge an interest in research.[31] The liberality of Parkinson's approach was undercut somewhat by the difficulty of obtaining such funding at this time. The major sources of funding for medical research in the inter-war period were philanthropies such as the Commonwealth Fund, which awarded most of their monies to independent research foundations and more prestigious schools like Johns Hopkins and Harvard. Until after the Second World War, when the federal government would become a major supporter of medical research in the United States, schools like Temple had to rely on the generosity of their wealthier patients, and companies such as drug manufacturers who had an interest in a particular medical problem or doctor.[32]

To their credit, a number of Temple faculty members managed to find funding for ambitious experimental projects in a competitive era. Some individuals, most notably Ernst Spiegel, Chevalier Jackson, Temple Fay, William Chamberlain, Waldo Nelson, Morton Oppenheimer, Henry Wycis, and John Kolmer even acquired na-

30. Anderson and Smiley, "Survey of Temple University School of Medicine"; Parkinson, "Philosophy of Medicine," pp. 8–10; Trustees' Minutes, 28 October 1929, Templana Collection, Temple University (hereafter cited as Trust. Min.).

31. *Annual Report,* 1933–1934; Perry, "Dean Parkinson," pp. 10–12; Trust. Min. 27 April 1928, 28 October 1929, 8 December 1929, and 23 March 1930.

32. E. Richard Brown, *Rockefeller Medicine Men* (Berkeley, CA: University of California Press, 1979), pp. 98–242; Daniel Fox, *Health Policies,* pp. 70–93; A. McGehee Harvey, *Science at the Bedside* (Baltimore, MD: The Johns Hopkins University Press, 1981); Vernon Lippard, *A Half-Century of American Medical Education, 1920–1970* (Baltimore, MD: Port City Press, 1974), pp. 73–78; George Rosen, "Patterns of Health Research in the U.S., 1900–1960," *Bulletin History Medicine,* 1965, 39:201–210.

Figure 3. Dean Parkinson and some of the Temple University School of Medicine's more illustrious faculty, 1930.
Courtesy of the Conwellana-Templana Collection/University Archives, Temple University Libraries.

tional reputations. For such eminent Temple faculty members, as well as for a number of their lesser known colleagues, scientific research and experimentation were simply a way of life that could not be denied (See Fig. 3). Active researchers were, nonetheless, a minority at Temple in the years before World War II, but a minority who helped Parkinson to convince the AMA that Temple Medical School was moving — be it ever so slowly — toward a greater recognition of the importance of scientific research in the education of medical students.[33]

The modest nature of Temple's research reputation in the years before the Second World War does not mean that laboratory work and training in the scientific method were neglected by the faculty. A review of curricular materials and student notebooks shows that quite the contrary was true. There was, however, a decidedly clinical cast to much of this material. The clinical orientation of the faculty, even basic scientists like Morton Oppenheimer and Robert Hamilton, is not surprising given the fact that they were hired by Parkinson. Parkinson had a tendency to hire men who were or had been

33. Anderson and Smiley, "Survey of Temple University School of Medicine"; *TUSM Cat.*, 1943, pp. 82–94; *TUSM Cat.*, 1944, pp. 86–97.

private practitioners. Even a large percentage of the basic science faculty he hired had MDs as well as Ph.Ds. Few of these basic scientists ever practiced medicine, but their training gave them an understanding of clinical problems that Parkinson felt teachers of medicine should possess.[34]

Parkinson's penchant for hiring faculty with clinical interests was also due to the financial circumstances in which he found the institution. During the 1930s and 1940s when Parkinson did his heaviest recruiting, he had very little money with which to attract high-quality faculty. He did, however, have a measure of control over a sizable patient population. The neighborhood around the medical complex during these years was a fairly stable middle-and working-class residential area bordered by a growing commercial district. Doctors coming into this area could expect a healthy practice, especially if they received the support of the local medical leadership. Parkinson could deliver this support, as well as access to an active, well-run hospital, and a status enhancing medical school affiliation. In exchange, physicians agreed to devote a percentage of their time to teaching medical students and house staff. Referred to as voluntary, part-time, or geographical full-time faculty, physicians hired under these circumstances made up the vast majority of Temple's medical faculty until the 1960s. In the pre-World War II, period only the basic science faculty and Parkinson were full-time employees of the medical school.[35]

Within this part-time system, the individual physician had a great deal of freedom to develop the kind of practice and earn the amount of money he or she wanted while still keeping a medical school affiliation. The medical school also benefitted since this system allowed Parkinson to recruit a high-quality faculty with a minimal cash outlay. This system could even generate funds for the institution if the doctors involved sent their paying patients to the hospital. Yet, there were certain drawbacks to this part-time arrangement which concerned officials of the AMA and AAMC. From the reformers', especially Flexner's perspective, "extra-university employment" created a situation of divided loyalty that undermined the quality of medical instruction. Citing the complexity and rapidly

34. This characterization of Temple as a clinically focused institution is based on an analysis of *TUSM Cat.*, information on curriculum contained in the Maj. Fac. Min., and the general career pattern of its faculty.

35. Anderson and Smiley, "Survey of Temple University School of Medicine," pp. 1–23.

changing nature of scientific disciplines, reformers urged medical schools to employ only full-time medical educators.[36] The campaign for full-time medical school teachers was the least successful aspect of the national reform program. Despite regular harangues against the "extra-university employment" of medical faculty, Temple and many other American medical schools continued operating with only a small percentage of full-time faculty until well after the Second World War. The schools that did convert to the full-time system were mainly the wealthier and more prestigious institutions like Johns Hopkins and Washington University. The divided opinion among the American medical establishment over the efficacy of the part-time system and the tremendous cost of paying full-time salaries forced the AMA to accept compromises such as the one worked out at Temple. By the 1940s, compromise had thus become a strategy which both medical schools and the AMA understood.[37]

With the full-time faculty issue, as with research, lack of money proved to be an important factor in Temple's inability fully to implement AMA recommendations. But money was not the sole explanation for Temple's reliance on a part-time faculty. Parkinson, like William Osler and many other medical leaders, felt that the practicing physician brought special insights and skills to medical teaching. Teachers firmly based in the realities of private practice were especially important, Parkinson believed, at a school like Temple which prided itself on the excellence of the general practitioners it produced. The special gifts of the private practitioner offset the drawbacks of the part-time system, the dean believed, especially if he maintained firm control over the teaching program, and Parkinson proved more than willing to exercise such control.[38]

Investigators from the AMA and AAMC who visited Temple in the years between 1920 and 1950 proved less sanguine about the school's reliance on this part-time, private-practitioner faculty. These investigators were even concerned with the quality of clinical teaching that this faculty delivered. Much of their concern focused on the education program of the Temple University Hospital. Despite the fact that the hospital fulfilled medical authorities' key requirement of being controlled by the medical school, it was not,

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36. Kunitz, "Professionalism and Social Control," pp. 22–23; Ludmerer, *Learning to Heal,* pp. 207–213, 217; Rothstein, *American Medical Schools,* pp. 151, 160–169, 172–178, 225–229, 256–269.

37. Ludmerer, *Learning to Heal,* pp. 207–212.

38. Parkinson, "Philosophy of Medicine," pp. 8–10.

in their minds, a "true" teaching hospital. The AMA's criticism of the hospital was especially strong in the years before 1929, the year Parkinson became medical director. In these early years, the critical comments focused on the limited number and variety of cases that were available for Temple medical students. Until 1930, the hospital associated with the Temple Medical School was a small charity facility founded by Conwell called the Good Samaritan. Situated several miles north of the medical school and university, Samaritan Hospital shared these institutions' mission to serve the less fortunate. Since admitting its first case in 1892, Samaritan Hospital had pursued its charitable role with vigor, while simultaneously accumulating a sizable debt. Management of the hospital was taken over by the medical faculty in 1903, but the two institutions did not merge formally until 1906. Even after the merger, the medical school's control over the hospital was limited. Despite the fact that after 1906 only members of the medical school faculty could practice in the hospital, the two institutions continued to maintain separate identities, which were heightened by the several miles of Broad Street that separated them.[39]

This geographic divide, the small size of the patient population, and the faculty's reliance on old-fashioned teaching methods continued to disturb outside investigators. In the years between 1910 and 1930, AMA officials also commented negatively on the less than careful management of patient records at Samaritan and the antiquated nature of the x-ray machinery and laboratory facilities. Such facilities offered medical students little opportunity for the kind of "hands on" practical training that AMA investigators regarded as a necessity. In a proper teaching hospital, Temple faculty were told, medical students learned by treating patients, not merely by watching.[40]

Criticisms of both the quality of teaching and the facilities at Samaritan Hospital played a major role in getting Temple's AMA rating lowered from a "B" to a "C" in 1920. In the AMA's three-tier system for evaluating medical schools, "C" was the lowest rank: it signified a school "in need of complete reorganization." A "C" rating also meant that students from the school were barred from

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39. Fac. Min., 1901–1909, especially 19 September 1903; Perry "Incredible University," Chap. 8, pp. 5–6.

40. Flexner, *Medical Education*, pp. 295, 299–300; Council on Medical Education, "Annual Presentation of Education Data," 1910–1940 which appears annually in *Journal American Medical Association*.

taking state licensure exams. Receiving such an evaluation was a devastating blow to the Temple medical faculty and almost precipitated the school's closing. It had the added effect of confirming the suspicions of many of the faculty who believed that the AMA was out to get Temple. Describing AMA officials in such terms as "pliable liar" and "fanatical brute," many on the Temple faculty were convinced that reformers had finally succeeded in their efforts to "kill" Temple. Only an impassioned plea by the student body and a successful last-resort lobbying effort for state aid persuaded the faculty to fight to keep the school alive.[41]

The decision to fight to regain AMA approval meant that Temple had to commit itself to an extensive reorganization, particularly of the hospital. Between 1921 and 1928, Samaritan restructured its pediatric ward, its maternity facilities, its x-ray department, and its operating rooms. The hospital also expanded its facilities to include a larger number of private rooms for paying patients. In addition, a fund-raising effort was inaugurated for money to build a new medical school building across Broad Street from Samaritan Hospital.[42] AMA officials greeted these changes with approval, and in the mid-1920s returned Temple to the ranks of "B" schools; but they were not completely satisfied. Samaritan Hospital was still geographically separated from the medical school, its patient mix was inadequate for teaching purposes (it had too many surgical patients), and there was an over-reliance on such didactic teaching techniques as the ward walk and clinical lecture. In their 1927 evaluation, the AMA urged Temple officials to undertake a more ambitious program of change and bring the medical school and hospital closer, both geographically and administratively. An evaluation that same year by accrediting officials from New York State reiterated these arguments. Both bodies praised the strides Temple had made in clinical teaching reform, but made it clear that they wanted more. What they wanted was not a community hospital

41. Trust. Min., 17 April 1920, 22 March 1920, 31 March 1920. Also see the following letters from Louis Sajous to Frank C. Hammond, 15 July 1920, 18 July 1920, 4 October 1920 and William Hammond to Laura Carnell, 31 March 1920, Sajous Papers.

42. Eberwein, "Tall Oaks," p. 7; *Skull,* 1926, p. 21; *Skull,* 1928, p. 27; *Skull,* 1929, p. 23.

that allowed some teaching, but a teaching hospital that made education as high a priority as patient care.[43]

Converting Samaritan Hospital into such a facility was one of the principal tasks facing Parkinson when he became medical director in 1929. Parkinson's first action was to secure a name change for the hospital from the Samaritan Hospital to the Temple University Hospital. According to the president of the university, Charles Beury, the name change was "to more clearly reveal its [the hospital's] close connection with the University." To Parkinson, the name change had an even more important meaning — it was a symbol of his and the medical school's power over the hospital, a power that he would need to fulfill AMA's demands for a "true" teaching hospital.[44] In the AMA's view, for Temple to provide quality medical education, the institution required a hospital in which each student was given well-supervised, sustained, one-on-one experiences with patients. The institution that could provide such well-organized clinical clerkships was not called a hospital, but rather a university medical center by its advocates.[45]

Creating a university medical center at Temple involved Parkinson in an ambitious reorganization campaign that began with Samaritan Hospital's finances. At the time Parkinson took over Samaritan Hospital's management, it had $66,355.50 in unpaid bills, as well as $139,817.45 in notes owed to the university. The directors of Samaritan had allowed an increase in the number of private (pay) beds, but the hospital still functioned mainly as a charity institution. Remaining true to Conwell's dream of community service had slowly buried the hospital under a mountain of debt that made reform impossible. So, before he could begin the creation of a teaching hospital, Parkinson had to put the hospital on a more stable financial footing. He had to do so, university trustees warned, without abandoning Conwell's mandate to care for the underprivileged. The hospital Parkinson was ultimately asked

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43. N. P. Colwell, "AMA Council on Medical Education and Hospital Inspection Report," (13 May 1927), TUSM Papers; Harold Rypins, "Report of the Inspection of Temple University School of Medicine," (5 April 1927), TUSM Papers.

44. Trust. Min. 26 April 1929; *Skull,* 1931, p. 27.

45. Ludmerer, *Learning to Heal,* p. 401; also see his article "The Rise of the Teaching Hospital," *Journal History Medicine Allied Sciences,* 1983, *38*:389–390, 392–412; Stevens, *In Sickness and in Wealth,* pp. 66, 78, 137–138.

to create was to be simultaneously a teaching facility, a charity institution, and a money-making university resource.[46]

In the early 1930s Parkinson assumed the task of building such a multipurpose facility with great vigor. He began by renovating the hospital's physical plant, including modernizing such outmoded facilities as the heating system, the elevators, the kitchen, and the laundry. It also meant adding a large number of private and semiprivate beds and increasing ward facilities. Between 1930 and 1940, the hospital capacity went from 350 to 500 beds. New facilities such as a specially equipped operating suite, a bronchoesophagology clinic, and a more modern x-ray department were built as well. In subsequent years, Parkinson went on to acquire a new physical-therapy department, a host of new outpatient clinics, a new ambulance, and a variety of new medical instruments.[47]

There was so much growth at the hospital and medical school in the 1930s that one observer described the institution as "shrieking with growing pains." As painful as the growth may have been at times, it paid off as the hospital deficit began to dwindle and the patient census increased even during the hard times of the Depression. Despite a substantial amount of free or partial-pay care due to the economic downturn, Parkinson could announce in 1935 that the hospital had an operating budget "with a slight excess of income over expenses."[48]

The transformation in Temple Hospital that occurred in the first decade Parkinson had assumed power was clear to all observers. What was not clear was whether this new hospital fulfilled AMA expectations for a modern teaching hospital. The main thrust of Parkinson's reform campaign had been to improve the hospital's physical plant and its fiscal standing. Although changes in these areas certainly improved the teaching environment in the hospital, their impact on teaching methods was indirect at best. For example, new facilities and equipment made it easier for Parkinson to recruit high-quality physicians, but the heavy patient load many of these physicians carried limited the amount of time they could devote to teaching. In addition, one of Parkinson's most important innova-

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46. *Annual Reports,* 1931–1932, 1932–1933; Parkinson, "Statement," pp. 5–9; Trust. Min. 27 February 1929.

47. *Annual Reports,* 1931–1937; Parkinson, "Statement," pp. 5–9, 16–19, 28–29, 31–32; Perry, "Dean Parkinson," pp. 7–9; Trust. Min. 21 June 1939.

48. *Annual Reports,* 1931–1937; Parkinson, "Statement," pp. 1–15; *Skull,* 1931.

tions — increasing the percentage of private (pay) patients admitted to the hospital — actually under cut his teaching goals to some degree since most of these patients were not available for teaching purposes. Given these circumstances, it is not surprising that AMA investigators remained critical of Temple's clinical teaching program. What is notable is the way in which the AMA chose to handle their critique. After warning Parkinson repeatedly that Temple needed to end its reliance on passive teaching techniques and the imbalance between the number of students and the number of teaching beds, the AMA put Temple on "confidential probation."[49]

This probation is interesting not so much for what it says about Temple as for what it reveals about the AMA Council's relationship with the medical schools it was policing. Perhaps the most intriguing aspect of the probation was its confidential nature. A school's failure to live up to AMA expectations was by the mid-1930s no longer a subject for public scrutiny. On the contrary, problems, even ones as serious as those the AMA identified in Temple's clinical teaching program, were a private matter. Such private criticism is a dramatic change from the devastating and very public demotion of rank that Temple received in 1920. In the 15 years since Temple had received its "C," the AMA Council had abandoned the ranking system and adopted a much more conciliatory stance toward the schools it evaluated. In this new era, medical education reform was no longer a matter of national authorities laying down the law and medical schools complying or being "killed." By the mid-1930s, medical education reform was a matter of negotiation. The 20 years of discussion over the nature of clinical teaching at Temple that followed the 1935 confidential probation provide additional evidence of the interactive nature of medical education reform in the mid-twentieth century. Bringing Temple's clinical teaching program into line with AMA recommendations entailed the same kind of negotiation and compromise that research and faculty reform had required.

Medical education reform at Temple in the years between 1920 and 1950 was a slow and uneven process that was far from complete at mid-century. There were still many elements of Flexner's "modern university medical school" that were not yet realities at Temple. The school's research record was not quite what AMA officials had in

49. Anderson and Smiley, "Survey of Temple University School of Medicine," p. 2; *Temple Cat.*, 1932–1943; Herman Weiskotten and H. W. Ireland, *Medical Education in the United States: 1934–1939* (Chicago: American Medical Association, 1940).

mind; neither were its hospital and its faculty considered ideal. Yet, they were good enough to get AMA approval and encouragement. The situation at Temple is best described as transitional. Poised with one foot in a past world of medical teaching and one foot in the future, Temple was a school that truly did not know its place.

In conclusion, I would like to suggest that Temple was not alone in its confusion over place. For every Johns Hopkins and Washington University that had fulfilled reformers' dreams and taken its place in Flexner's modern medical education system, there were five medical schools like Temple which were still struggling to implement new ideas. We need to know more about the experiences of institutions that were still in the process of "becoming" Flexner's modern university medical schools.[50] Learning more about these schools in transition may reveal that not only was Flexner wrong about Temple's future, but about the shape that the modern university medical school ultimately assumed.

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50. Fox, "Flexner's Unpublished Report," p. 488.

William Scott Wadsworth: An Appreciation of an Anomalous Career

JULIE JOHNSON

> Of a commanding stature, topped by a shock of snow-white hair, cut rather long, Dr. Wadsworth customarily affected the high, stiffly starched white collars fashionable in his youth. Until replaced by horn-rimmed glasses in his later years, he favored old-fashioned pince-nez spectacles secured by a narrow, black silk ribbon. Distinguished in appearance, he was equally distinguished on the witness stand, where he frequently exhibited testy and somewhat caustic impatience with inept or ill-informed questioners.[1]

William Scott Wadsworth (1868–1955) was a pioneer forensic pathologist who worked in the Philadelphia coroner's office for over half a century. Wadsworth was one of the first generation of medical detectives, a self-taught expert in medico-legal post-mortem technique, toxicology, and ballistics whose career included some of Philadelphia's most famous murder cases.[2] Wadsworth's career choice was an enigma to most of his fellow physicians: then as now, forensic pathology is an anomalous specialty, practiced in neither of the familiar locales of hospital or private office; the diagnostic skills it demands often go unrecognized because they are not directed at treatment of the living. Like public health work, forensic medicine lacks prestige and autonomy, and it suffers further from an association with corruption — the physical corruption of long-dead bodies, the moral corruption of crime, and the political corruption of municipal bureaucracy. Yet for Wadsworth, forensic medicine possessed a fascination that far outweighed the lures of wealth and the approbation of his colleagues. When he died at the age of 87, his estate was valued at less than $4,000, and the College of Physicians of Philadelphia, of which he had been a member for over half a century, failed to note his passing.[3] This biographical sketch is an attempt at rectification.

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1. William Scott Wadsworth, (hereafter WSW) *Bulletin* file, Temple University Urban Archives, hereafter TUUA.
2. Ibid.
3. Ibid.

Transactions & Studies of the College of Physicians of Philadelphia Ser. 5, Vol. 12, No. 3 (1990); 335-346
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Figure 1. William Scott Wadsworth, 1868–1955.
Courtesy of the Historical Collections, College of Physicians of Philadelphia.

Wadsworth was born on 29 January 1868, in San Diego, California, but his family had Philadelphia roots to which they would return. Wadsworth's father, the Reverend Charles Wadsworth, was pastor of the North Broad Street Presbyterian Church for many years.[4] Young "Willie," as his family called him, was sent to Harvard for his undergraduate education; there he studied psychology with Josiah Royce. Upon graduation in 1891, he continued his studies in Freiburg, Germany, where he met the great psychologist of perception, Hugo Münsterberg. Wadsworth began medical studies at the University of Pennsylvania in the fall of 1892, but returned to Harvard to work with Münsterberg when he departed for Cam-

4. Ibid.; The Reverend Charles Wadsworth was also a long-time correspondent of the poet Emily Dickinson, and some Dickinson scholars believe her to have felt more than just friendship for him. For a detailed discussion of the Wadsworth-Dickinson connection, see Richard B. Sewall, *The Life of Emily Dickinson, Vol. 2* (New York: Farrar, Straus and Giroux, 1974).

bridge in 1893.[5] After a year, Wadsworth returned to Philadelphia to attend the University of Pennsylvania Medical School, where he was granted his degree in 1897.[6] Following graduation, Wadsworth began to lay the groundwork of a distinguished career, serving as resident in pathology at Presbyterian Hospital and as clinical chemist at Pennsylvania Hospital. He joined the Pathological Society of Philadelphia in 1898, published extensively in its *Proceedings*, and was made a Fellow of the College of Physicians in 1903.[7] His sponsor at the College of Physicians, Dr. Thomas H. Fenton, recommended Wadsworth for the Fellowship noting, "His attainments are unusual, and he has displayed singular ability in various fields of scientific work."[8]

The most significant event of Wadsworth's early career, however, came four years earlier in 1899, when his former anatomy professor at the University of Pennsylvania, Dr. Henry W. Cattell, recommended Wadsworth as his replacement in the office of coroner's physician.[9] At that time, the Philadelphia coroner's office was a machine-controlled post with a reputation for graft, corruption, and inefficiency. It was responsible not only for autopsies and investigations of sudden and suspicious deaths, but also for the care of the deceased's effects and the estates of coroner's cases who died intestate. Embezzlement and outright theft were common, and coroner's deputies — the men in charge of claiming and transporting bodies to the morgue — routinely collected bribes from undertakers whose services they recommended to the families of the dead.[10] Despite its sordidness, no place offered the pathologist a better opportunity to study the pathology of trauma and chronic disease than the coroner's office. Cattell's textbook, *Post-Mortem Pathology*, owed much to his research there, and his dedication thanked

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5. WSW file, University of Pennsylvania Archives (hereafter UPA); letter, Timothy Leary to Alan Moritz, 19 September 1940, Department of Legal Medicine files, Archives of Harvard Medical School, Francis A. Countway Library of Medicine (hereafter DLM); "Hugo Münsterberg," *Dictionary of American Biography*, Dumas Malone, ed., (New York: Charles Scribner's Sons, 1934), pp. 337–338.

6. WSW file, UPA.

7. Ibid.; *Proceedings* of the Pathological Society of Philadelphia.

8. Letter, Thomas H. Fenton to Thomas R. Neilson, 24 January 1903, WSW Fellow File, College of Physicians of Philadelphia.

9. WSW, TUUA.

10. *Stenographer's Notes of Testimony Before the September 1951 Grand Jury*, Philadelphia City Archives, passim.

Wadsworth for his contributions.[11] With his appointment as coroner's physician, Wadsworth began a 56-year association with the office that would end only with his own death.

With his training and social background, Wadsworth could clearly have followed in his mentor's footsteps, pursuing his clinical researches, continuing his hospital affiliations, and eventually gaining a teaching position. Yet, despite his early success as a member of the new scientific medical elite, Wadsworth became disillusioned with its reductionist approach. Although Wadsworth applauded the rising standards in the profession, he attacked the methods chosen to achieve them: "Today therapeutic literature is given up to the intensive study of some phase of the subject as developed in the laboratory, with mental outlook as limited as the physical room in which the work is done . . ."[12] The new scientific medicine, with all its advantages, failed to recognize "the true composite nature . . . of medical thought."[13] Wadsworth's work at the morgue demanded a more wholistic approach to post-mortem diagnosis. While clinical pathologists generally knew what disease had caused death or which organs were most likely to be affected, Wadsworth, at the morgue, was continually faced with deaths of unknown cause. He was forced to take every possible factor into account, and to determine not just the cause, but also the manner of death. As a consequence, he developed a medical philosophy and approach that were at odds with elite medicine's increasing specialization and laboratory orientation. His concern was not with laboratory research, private practice, nor even public health, but with what he termed "state medicine," medicine in the service of the society as represented by the state and its laws.[14]

The turn of the century was a time of tremendous urban growth in the United States. Hundreds of thousands of immigrants poured into the nation's cities to work in its burgeoning factories. Cities such as Philadelphia where crowding and alienation accompanied the migrating masses also witnessed escalating numbers of

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11. Henry W. Cattell, *Post-Mortem Pathology* (Philadelphia: J. B. Lippincott Company, 1903), p. v. Henry W. Cattell, "Letter to the Editor," *Journal of the American Medical Association,* 1906, 47:1208.

12. WSW, "Industrial Toxicology," *New York Medical Journal,* 1920, *111*:1101–1103.

13. WSW, "Civic Responsibility of the Physician," *New York Medical Journal,* 1915, *101*:577–579.

14. WSW, "Obstetric Problems and the Coroner's Office," *American Journal of Obstetrics and the Diseases of Women and Children,* 1917, 76:622–631, 674–676.

murders, suicides, and accidents. The problem of determining the exact nature of death became more pressing. The job of coroner's physician called for both technical skill and interpretation. Determining whether a poisoning death was suicide or murder depended not just on toxicological analysis but also on an understanding of the victim's psychology and circumstances. Wadsworth therefore found an appropriate niche for his psychological, pathological, and chemical skills in the solution of crimes. To one who thought much about the civic responsibilities of the medical profession, his work offered intellectual stimulation coupled with a sense of duty fulfilled.[15]

Wadsworth's talent and ingenuity were fully utilized at the morgue. His position was supposed to be only part-time, but Wadsworth devoted himself fully to it, including many of his leisure hours. A marksman, he applied his skill to ballistics research and correlated angles of fire in the field to what he found on the autopsy table; he was the first to discover that a close-range gunshot would always leave a small gas pocket under the skin, a discovery that was put to use by forensic experts worldwide.[16] In 1910 and 1911, *International Clinics* featured some of his findings on the pathology of gunshot wounds as preparation for an American Medical Association post-graduate course.[17] In 1915, Wadsworth published his own textbook on medico-legal post-mortem examination; of the 304 photographs in the book, Wadsworth took all but a handful himself, combining yet another hobby with his research.[18] In his work, Wadsworth continually emphasized the medico-legal aspects of his findings over the clinical; his job was not to save the next victim of poisoning or gunshot, but to determine, after death, who was responsible, and most important of all, to prove it in a court of law.

Medico-legal expertise went virtually unrecognized at the turn of the century. The courts considered any physician an expert on any medical question, no matter how far removed from the purview of his or her own practice. But most physicians disliked being called

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15. WSW, "Civic Responsibility of the Physician"; WSW, "The Newspapers and Crime," *Bulletin of the American Academy of Medicine*, 1911, *XII*:316–325.

16. WSW, UPA; WSW, TUUA; WSW, "Wounds," *International Clinics* , 1911, *2*:275–292.

17. Ibid.; WSW, "Wounds by Fire Arms," *International Clinics*, 1910, *IV*:276–294.

18. WSW, *Post-Mortem Examinations* (Philadelphia: W. B. Saunders, 1915).

into court, because medical evidence must be submitted to two standards of proof: scientific and legal. A procedure or discovery might fulfill the requirements of the first without satisfying those of the second. The adversarial relationship imposed on expert witnesses and the necessity of proving the validity of scientific points to a lay audience — the judge and jury — galled the medical profession. Legal procedure offered an affront not only to their expertise, but also provided a public forum for dissent which, many physicians felt, harmed the medical profession's efforts to forge a collective identity. Physicians throughout the United States continuously tried to have courtroom procedures and evidentiary rules changed to their advantage, attempting to establish procedures that would privilege medical testimony over that of lay witnesses and exempt physicians from cross examination. They were met with fierce opposition from the legal profession, however, which was adamant about retaining control of the courtroom.[19] Wadsworth's German mentor, Hugo Münsterberg, created a furor among attorneys with his book *On the Witness Stand: Essays on Psychology and Crime*, first published in 1908, in which he stated that psychologists should be given the task of choosing those best suited to serve as jurors and witnesses.[20]

Medico-legal experts like Wadsworth might complain about the rules of evidence, but of necessity they adapted themselves to working within them and developing the skills necessary for successful court presentations. For example, Wadsworth refused to perform an autopsy in a gunshot case unless the suspected gun and shells were available for comparison; to do otherwise would have made his testimony vulnerable under cross examination.[21] It was through such careful preparation that he developed his reputation as an unimpeachable expert witness, whom experienced defense attorneys forbore to challenge.[22]

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19. M. A. Barwise, "Scientific Proof and Legal Proof," *Maine Law Review,* 1914–1915, *8*:67–86; Learned Hand, "Historical and Practical Considerations Regarding Expert Testimony," *Harvard Law Review,* 1899, *12*:443–463; Hubert W. Smith, "Scientific Proof and the Relations of Law and Medicine," *Boston University Law Review,* 1943, *23*:143–158; Janet Ann Tighe, *A Question of Responsibility: the Development of American Forensic Psychiatry 1838–1930* (Ph.D. Dissertation, University of Pennsylvania, 1983), passim.

20. Matthew Hale, Jr., *Human Science and Social Order: Hugo Münsterberg and the Origins of Applied Psychology* (Philadelphia: Temple University Press, 1980), pp. 115–125.

21. *Grand Jury,* pp. 2175, 2178.

22. WSW, TUUA.

Although imposing on the witness stand, in his younger years Wadsworth was known as a convivial sort among his fellow physicians. He was an active and well-regarded member of two medical clubs, the Aesculapian, which was primarily a social club, and the Philadelphia Medical Club, which had a more serious bent.[23] Yet he could still be quite reserved: in 1910 he told no one of his plans for marriage until the engagement was announced in the newspaper, and then refused to divulge his fiancee's name.[24] While the first decade of his marriage marked his growing skill and recognition as a medico-legal expert, it was also a period of increasing conflict with his fellow members of the local medical elite in the College of Physicians, including his medical school mentor, Cattell.

Wadsworth's estrangement from his medical brethren grew out of the controversy over reformation of the coroner's office. Beginning in the early twentieth century, and fueled by Progressive-Era reform's emphasis on efficiency, scientific expertise, and an end to government corruption, medical men throughout the country banded together in attempts to abolish the coroner system and to replace it with a medical examiner system. Medico-legal investigation in the United States was indeed in need of reform. Coroners needed no professional qualifications; in Philadelphia, as in other large cities, loyalty to one's political party was the main prerequisite. Nor was any specialized training or experience required of the coroner's staff — physicians, deputies, investigators, clerks, and detectives — all of whom were political appointees. Coroner's physicians, who performed the autopsies, were only required to be medical doctors, not pathologists. Most were from the lower and middle ranks of the profession, and were granted the part-time position as a reward for faithful service as ward leaders or political organizers.[25] Men like Wadsworth were a small but growing minority, and they feared for the growth of their specialty at the hands of the general medical profession, which devalued medico-legal knowledge and skills.

The model for medico-legal reform in the United States was the medical examiner system established in Massachusetts in 1877, and which remained the only such system in force for 40 years.[26]

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23. WSW Scrapbooks, Vols. 19–22, College of Physicians of Philadelphia.
24. WSW, UPA.
25. *Grand Jury*, p. 273.
26. Faruk B. Presswalla, "Historical Evolution of Medico-Legal Investigative Systems," *Bibliography of the History of Medicine*, 1975–1979, pp. 6–7.

Yet the Massachusetts model, because of its age, called only for a physician to head the office; in the 1870s, the specialty of pathology, let alone forensic pathology, was still in its infancy in the United States.

Wadsworth alienated the local medical profession by defending the administrative structure of the Philadelphia coroner's office, insisting that its work was not purely medical, as the profession maintained, and that the medical expertise needed by the coroner existed in the persons of the Coroner's physicians. These men alone, maintained Wadsworth, experts like himself in medico-legal problems, held the responsibility for any reforms in medico-legal practice and education. The duty of the rest of the medical profession was to cooperate with the coroner's office, and not to resort to "sophomoric diatribes" in the press on a subject they incompletely understood.[27]

Alliances between coroners and forensic pathologists, such as Wadsworth forged in Philadelphia, existed in municipalities throughout the nation. Many forensic pathologists preferred to gamble on the support of a lay coroner, who might exhibit a healthier respect for forensic expertise than a medically trained coroner. Moreover, a lay coroner, as a career politician, would certainly be more adept at manipulating the machine bureaucracy for funding than a crusading outsider. Unfortunately, such arrangements meant countenancing, or at best ignoring, the continued scandals that beset the coroner system, scandals the medical profession took pains to publicize and which put coroner's physicians at odds with their brethren in medical examiner systems.[28]

Wadsworth learned the perils of politics early in his association with the coroner's office, when his support of a reform faction in the Republican Party in 1905 temporarily cost him his job at the coroner's office.[29] From then on, he kept a determined apolitical stance, and was known for his aloofness from the other denizens of City Hall.[30] The Republican machine did well by him in the 1920s, allocating funds for a new morgue whose state-of-the-art

27. WSW, "The Coroner and the Physician," *New York Medical Journal,* 1916, *103*:400–402.

28. Samuel Gerber in Cleveland, Herman N. Bundesen in Chicago, and Henry W. Turkel in San Francisco are other examples.

29. WSW, TUUA.

30. WSW, TUUA.

design by Wadsworth was celebrated in *Scientific American*.[31] When Franklin Roosevelt's popular presidency helped break the Republican stranglehold on city offices in 1933, Wadsworth was demoted from the position of chief coroner's physician by the new Democratic coroner. He was not, however, fired, despite the clean sweep of officeholders and appointees that usually occurs in such situations; he continued to handle all cases of suspected homicide, with his successor as chief frequently soliciting his advice.[32] Despite the indignities he was subjected to during the 1930s — the meager salary, the lack of departmental funds that forced him to construct most of his equipment himself, and the pressure from politicians to tailor his findings to fit their agenda — Wadsworth remained with the coroner's office. His fees as an expert witness, as well as his national recognition as a leading medico-legal authority, may have made up for much. With a wife and just one daughter Wadsworth also had limited financial demands on the domestic front.[33] Perhaps most importantly, however, staying with the coroner's office was the only way Wadsworth could continue to pursue his work, for despite the agitation of the medical profession, few jurisdictions had established medical examiner systems.

In 1940, Wadsworth was honored at the National Association of Coroners meeting in Philadelphia and was profiled in *Time*.[34] One attendee, Dr. Timothy Leary, a medical examiner from Boston, was Wadsworth's guest and characterized him as follows: "Wadsworth is a picturesque personality, bald with a flowing white fringe, . . . thoroughly disillusioned, with a vitriolic tongue."[35] Leary was affiliated with Harvard University's recently established department of legal medicine, which with Rockefeller Foundation funding was setting out to train a new cadre of forensic pathologists. The legal medicine department saw another part of its mission as the extension of the medical examiner system, so its members tended to view anyone supporting the coroner system with disfavor and suspicion.[36] Nonetheless, after laying the sharp side of his Irish tongue to

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31. Albert A. Hopkins, "Safeguarding Society," *Scientific American*, 1931, *141*:176–178.

32. WSW, TUUA.

33. WSW, TUUA.

34. "Medical Detective," *Time*, 1940, *36*(10):40.

35. Leary to Moritz, DLM.

36. *Grand Jury*, pp. 235–238; letter, Dean C. Sidney Burwell to Alan Gregg, 5 January 1939, Rockefeller Foundation Archives, R. G. 1.1 200 A Harvard University-Legal Medicine.

the presentations at the coroners' convention, Leary gave grudging credit to Wadsworth's work in a letter to department head Alan Moritz, and suggested that the department of legal medicine try to persuade Wadsworth to donate his papers and museum of murder weapons and other professional paraphernalia to Harvard.[37]

As Leary remarked, Wadsworth was disillusioned, and at this stage of his career, he had every reason to feel this way. Forensic pathologists were still struggling for recognition of their specialty, and remained divided by the disagreement over which administrative structure, coroner or medical examiner, was best. Philadelphia's medical profession had attempted to compromise on the issue by trying to get a physician elected coroner, and in 1941 they finally succeeded. Republican Herbert Goddard, an otolaryngologist famous for removing Al Capone's tonsils during the gangster's stay at Eastern State Penitentiary, was elected, and confirmed some of Wadsworth's cynicism about medical interference in medico-legal matters.[38] Even though the Republicans, the party of which he was nominally a member, were back in control, Wadsworth was not promoted back to his old position as chief coroner's physician. Instead, Goddard selected a friend, Benjamin A. Gouley, for the position. Gouley was at least a pathologist, but had no forensic experience.[39] Goddard's choice for chief deputy coroner was another old friend, Matthew Roth, who continued in the position after Goddard's death in 1942 and the appointment and subsequent election of Dr. John Alan Bertolet to the position of coroner.[40] Bertolet and Roth visited Harvard and upon their return re-named the coroner's physicians medical examiners. There the attempt at reform seemed to stop. Dr. Gouley was given sole authority to state the official cause of death, a responsibility usually left to the coroner himself, but this seems to have come about mostly because of Bertolet's frail health; Roth and Gouley really ran the coroner's office from 1942 to 1950, while Wadsworth continued to toil away at homicide post-mortems into his eighties.[41]

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37. Leary to Moritz, DLM. Wadsworth's museum seems to have disappeared after his death, and may have been discarded by his daughter, who threw out most of his records and papers after he died.

38. Herbert Goddard file, TUUA.

39. Benjamin A. Gouley file, TUUA.

40. *Grand Jury,* pp. 6002–6008; John Alan Bertolet file, TUUA.

41. *Grand Jury,* pp. 6023–6048.

In 1949, politics once again affected Wadsworth's career. The victory of the Democratic Dilworth-Clarke reform slate unseated the Republican machine at last, and Democratic attorney Joseph Ominsky became Coroner.[42] Ominsky promptly promoted Wadsworth to chief medical examiner, causing Gouley to quit even though Ominsky asked him to stay on. Another staff member from the previous Republican administration, Dr. Elizabeth Wilson, also refused to stay and "work for a Democrat."[43] Feeling in Philadelphia politics was obviously running high: the district attorney's office, (which was still in Republican hands) mounted a Grand Jury investigation in 1951 into charges of corruption in Ominsky's administration. The star witness was Matthew Roth, the former Republican chief deputy coroner. Roth's attempt to discredit Ominsky backfired, however; while the Grand Jury found Ominsky's efforts to stamp out corruption "ineffectual," it indicted Roth for embezzling the estates of coroner's cases and for accumulating $10,000 while teaching, on city time, at the John Eckel's College of Mortuary Science. Wadsworth's reputation was one of the few that remained unassailed in the investigation, but so many examples of misconduct on the part of other employees emerged that the Grand Jury joined other civic and government bodies in calling for the abolition of the Coroner's Office.[44] In 1953, a bill was passed that called for a medical examiner system whose employees would be subject to civil service exams. Now new difficulties were encountered: where could someone be found with enough medico-legal knowledge to examine Wadsworth?[45]

Now in his mid-eighties, Wadsworth was still working hard. He had performed sixteen thousand autopsies in his career and participated in almost five thousand murder trials.[46] He had opposed the institution of a medical examiner system in the city, believing it a useless and expensive reform: there were still not enough medico-legal experts in the country to meet the demands of the system, thereby undermining its alleged superiority.[47] Two years of political infighting involving City Council, the County

42. Joseph S. Clarke, Jr. and Dennis J. Clarke, "Rally and Relapse, 1946–1968," in Russell F. Weigley, ed., *Philadelphia: A 300-Year History* (New York: W. W. Norton, 1982); *Manual of City Council,* 1949.
43. *Grand Jury,* pp. 563–564.
44. *Grand Jury,* passim.
45. Joseph Ominsky, TUUA.
46. WSW, TUUA.
47. WSW, TUUA.

Medical Society, The Committee of Seventy, the City of Philadelphia, and the Pennsylvania Supreme Court delayed implementation of the new system.[48] On 10 March 1955, Wadsworth was admitted to Episcopal Hospital complaining of fatigue and difficulty in eating. He died eleven days later, at the age of 87, two days before he would have begun his 57th year of service with the coroner's office. The autopsy found cancer of the pancreas to be the cause of death.[49]

Wadsworth and Ominsky were replaced by one of the new breed of forensic pathologists: Dr. Joseph Spelman, former Rockefeller Fellow at Harvard's department of legal medicine, became the first chief administrator and pathologist of Philadelphia's new Medical Examiner's Office.[50] Yet, as Wadsworth had predicted, Spelman could not find adequately trained people to fill the positions of assistant medical examiners.[51] Although Harvard worked hard at gaining recognition for the specialty within the medical profession's framework, gaining subspecialty certification from the American Medical Association and the American Board of Medical Specialties in 1958, its department of legal medicine was shut down in 1964. Forensic pathology is still a vocation that demands fieldwork rather than academic post-graduate training. Most forensic pathologists gain their interest and skill the same way Wadsworth did: through working in coroner's and medical examiner's offices.[52]

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48. Ominsky, TUUA.
49. WSW, UPA.
50. Joseph Spelman, TUUA.
51. Joseph Spelman, "Improvement in Investigation," *Philadelphia Medicine,* 1956, *51*:1215; letter, Richard Ford to Richard S. Childs, 1 April 1958 (National Municipal League), DLM.
52. William G. Eckert, "Development of American Forensic Pathology: Part II: The Twentieth Century," *Pathologist,* 1977, *31*:715–718.

The Need for Care: Families, Patients, and Staff at a Nineteenth-Century Insane Asylum

PATRICIA D'ANTONIO

Throughout the early nineteenth century, visitors came to Philadelphia from all over the country to see, first hand, how the Quaker "Asylum for Relief of Those Deprived of the Use of Their Reason, and for the Relief of Their Families and Friends" actually worked. The Asylum, self-consciously modelled after the Quaker York Retreat in England and opened in 1817, represented the first American experiment with a radically new institutional treatment of the insane. Moral treatment, as the English reformers christened the asylum reform program, rejected the older, eighteenth-century notion that those who had lost their reason partook of "the nature of . . . animals" and had to be treated like animals. Inspired by the Enlightenment's more optimistic view of the potential of human nature, the new therapy appealed to the insane's supposedly innate capacity to live a moral, ordered existence when placed in a systematized, structured, and disciplined institutional environment. If treated like rational human beings with the capacity, however dormant, for self-control, the insane would act more like rational beings by using their self-control. And the more the insane practiced self-control, the closer they would come to their recovery and their eventual cure. What had begun in Philadelphia in 1817 as an experiment had become, by the mid-nineteenth century, the country's dominant medical approach to the treatment of the insane. And it bequeathed to us today, for better or for worse, the traditional mental institution.[1]

This paper was presented at the Center for the Study of the History of Nursing and Francis C. Wood Institute for the History of Medicine Conference, "Care of the Sick: the Search for Reform," on 21 April 1990

1. The theoretical rationale and the practical workings of this new therapy were first published in Samuel Tuke's *Description of the Retreat, An Institution Near York for Insane Persons of the Society of Friends* (York, England: 1813). Several of the Philadelphia Quakers planning the Friends Asylum had visited the York Retreat and all were committed to its philosophy and its strategies. The Friends Asylum, in fact, repeated Tuke's sentiments in its Annual Reports and published pamphlets

Transactions & Studies of the College of Physicians of Philadelphia Ser. 5, Vol. 12, No. 3 (1990): 347-366
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Historians have long pointed to interconnected social and economic relationships when explaining the promise of insane asylums in the first half of the nineteenth century. Capitalist economic development created an available cash nexus for the buying of goods and services; industrialization's new social mores demanded more stringent and more disciplined personal behaviors; and the changing expectations of family life, concomitant with the fragmentation of kin networks in the cities, re-worked notions of responsibility for the care of the sick and the insane. Together, scholars argue, these forces converged to create a "new" institutional treatment — the asylum — for the troublingly disruptive symptoms of insanity.[2] The Friends Asylum in Philadelphia, self-consciously modelling the therapeutic regime of moral treatment which legitimated institutional care, saw itself in the forefront of this movement. As this case study will argue, however, the success of the Quaker Asylum in the early nineteenth century did not depend on its promise of a new treatment. From admission through discharge, families used the Asylum as if it were an extension of their own care: as if it were their own, albeit extended, family. The success of the Asylum, in fact, depended on its ability to share care-taking responsibilities with kin who wanted the insane out of the home, but not out of the family. Though families hoped for a cure when they admitted their deranged loved ones, what they actually wanted was help. They needed a respite from the burden of caring for those without reason at home. And, they turned to the Asylum as another, familiar piece of a mosaic of resources available to them to help with the often onerous burden of care.

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throughout the first generation of the Asylum's existence. For examples, see *Account of the Rise and Progress of the Asylum Proposed to be Established Near Philadelphia for the Relief of Persons Deprived of the Use of Their Reason* (Philadelphia: 1814); Robert Waln, *An Account of the Asylum for the Insane Established by the Society of Friends Near Frankford* (Philadelphia: Benjamin and Thomas Kite, 1825); Charles Evans, "An Account of the Asylum for the Relief of Persons Deprived of the Use of Their Reason," *The Friend,* 1838, *12*:33. For an historical analysis of the York Retreat and its influence in reshaping the treatment of the insane, see Anne Digby, *Madness, Morality, and Medicine: A Study of the York Retreat* (New York: Cambridge University Press, 1985).

2. The nineteenth-century asylum reform movement in the United States has been the subject of considerable historical interest. For excellent historiographical reviews of this literature, see Nancy Tomes, *A Generous Confidence: Thomas Story Kirkbride and the Art of Asylum Keeping, 1840–1883* (London: Cambridge University Press, 1984), pp. 7–18; and Gerald Grob, "Rediscovering the Asylum: The Unhistorical History of the Mental Hospital," *Hastings Center Report,* 1977, pp. 33–41.

Most Quaker families did not turn to the Asylum to help with the care of insane relations in the first half of the nineteenth century. A survey, conducted in the 1840s by the Asylum's "Committee to Obtain Statistics on the Numbers of Insane Friends in All Yearly Meetings to Encourage Admissions" reported the "melancholy fact" that so few confirmed cases of insanity among Quaker brethren had received the benefit of proper asylum treatment. All told, the survey counted 66 insane members or "professors with us" within the boundaries of the Philadelphia Yearly Meeting alone. Twenty-seven of these individuals were cared for at the Asylum, and two were in the Pennsylvania Hospital. Thirty-seven Quaker insane, slightly more than half, were cared for at home, within families and communities calling upon resources not too different from those used in bodily illnesses.[3]

These resources included, first and foremost, the Quaker religious community, with its strong tradition of "spiritual healing." The bleak, suicidal despair of melancholic Friends would, at times, respond to the gentle words of an elder or minister exhorting them to bear their cross as part of the trials visited upon brethren seeking their way toward the full experience of the "inner light" of the Holy Spirit. The seemingly irresponsible, potentially dangerous excesses of alcoholic Friends would hear sterner calls back to the Quaker discipline, calls back to their roles as "witnesses" to the "inner light" on threat of disownment from their families and from their communities.[4]

Yet, Quaker families did not depend solely on their ministers: they also turned to their own physicians to help with the care of insane brethren. Violently insane Quakers could at least be subdued with aggressively depleting medical therapeutics; at best, the proxi-

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3. The Asylum's managers had always believed the institution was underutilized by the Quaker community. As early as 1821 they tried to back their intuition with hard survey data, but the project was abandoned in 1825 because of a dismal response from the area Monthly Meetings. See "Managers Minutes" (hereafter MM), 11 March 1825, Haverford College Quaker Collection (hereafter HCQC), Haverford, PA. A summary of the more successful 1840s survey can be found in MM, 13 March 1846, HCQC.

4. See Charles Cherry, *A Quiet Haven: Quakers and Moral Treatment, and Asylum Reform* (Rutherford, NJ: Fairleigh Dickinson University Press, 1989). Also, Jack Marietta, *The Reformation of American Quakerism, 1748–1783* (Philadelphia: University of Pennsylvania Press, 1984), argues that late eighteenth-century religious transformation within the Society of Friends ushered in a new era of community tolerance and sympathy for eccentric or odd behaviors, particularly those associated with unusual religious testimonies.

mate cause, if a physical malady, would be resolved and the patients might find themselves cured. Similarly, withdrawn and lethargic Quakers would be treated with stimulating tonics, rousing blisters, and prescriptions for vigorous outdoor exercises. Friends respected the advice of their physicians: from George Fox's days in the seventeenth century onward, they valued those who ministered to the bodies of mortal men as much as those who ministered to men's souls.[5]

It is more difficult to judge exactly how early nineteenth-century Quaker families understood the relationship between the spiritual and medical healing of their insane relations. They did use physicians: the Asylum's medical casebooks record sketchy summaries of the various treatments tried at home. And they believed in the healing possibilities of religious worship: Rachel S.'s sister, for example, made a special trip to the Asylum to take her to their Meeting, despite the superintendent's stern warning that she was not yet well enough to sit quietly through it. It is likely, though, that the Asylum's own attempt to weave the religious and medical threads of healing together reflected patient's families' own understanding. At the Asylum, it was during "lucid intervals, or a state of convalescence" that the sympathetic companionship of fellow Friends and ministers had its "peculiar advantages." It was with "every dawn of intellect and in every moment of calmness" that those with "troubled minds" could be reached with the "consoling evidence that they were indeed regarded as men and brethren." Religion and medicine worked together, with medicine creating those moments upon which spirituality built.[6]

But not even religion and medicine could keep some Quaker brethren from sliding into more chronic forms of insanity. In fact, the kinds of data reported in the Asylum's 1840s survey suggest that families were willing to consider a relative formally insane only when his or her condition seemed chronic. And Quaker families preferred caring for their chronically insane relations at home. In some cases, these individuals were at home because their insanity

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5. For example, the insane son of one of the Asylum's managers was treated at home for his symptoms with medical prescriptions of port wine and daily rides. "Superintendent's Diary," (hereafter SD), 8 June 1823–23 November 1823, HCQC. Here and throughout the paper, patient names have been changed to protect their confidentiality.

6. SD, HCQC, 1 October 1822 and 20 October 1822. Waln, *An Account,* pp. 3–4.

was "mild"; in other instances they could be cared for "without danger." Home meant remaining a member of a loving and disciplined family, while also receiving conscientious care. But it also meant remaining a member of a cohesive, supportive, and responsible religious community.[7] Interestingly, home care did not always mean remaining physically a part of one's immediate family. Given the assumption that air, exercise, scenery, and associations all influenced that delicate physiological and emotional balance so necessary to the early nineteenth century's system of beliefs about illnesses and their cures, Quaker families, at times, sent their insane relatives out to work in the more healthy countryside, or simply to board nearby with another family. Such care could be expensive. One insane Quaker earned his way "by labour" in western Pennsylvania. Others turned to their Monthly Meetings for help with the cost. Such care, though, was seen as medically crucial and necessary. Boarding with another family changed the dynamic relationship between the insane Quaker's constitutional endowment and his environmental circumstance. A different climate, a new lifestyle, and changed social expectations hopefully laid the foundation for, at best, an eventual cure, or at the very least, the melioration of the disturbing and disruptive symptoms associated with insanity. More importantly, though, boarding with another family lifted, or at least shifted, the often fatiguing burden of day-to-day care. The families of the Quaker insane looked to others within their kin and community networks to provide the basic necessities of care — food, shelter, work, and protection — while they themselves maintained the more abstract roles of oversight and supervision. Boarding allowed the Quaker insane to remain part of their families and their community, though cared for apart from them.[8]

7. When compared with Quaker census figures, the rates of insanity averaged .74 percent of the Quaker population within Philadelphia Yearly Meeting. Even considering that the census figures included all Quaker children, the low incidence suggests only certain forms of insanity were reported. The fact that the survey's numerical categories were fleshed out with information on long-term care strategies suggests that those forms were chronic. Certainly, acute melancholia was not necessarily insanity. As Thomas Hamm argues in *The Transformation of American Quakerism: Orthodox Friends, 1800–1907* (Bloomingdale, IN: Indiana University Press, 1988), the predominant theme of Friends' spiritual growth involved tribulation and trials. As one Quaker wrote in 1841, "by the sadness of countenance the heart is made better," Hamm, *Transformation,* pp. 1–11.

8. MM, HCQC, 23 March 1846. See also Charles Rosenberg's "The Therapeutic Revolution: Medicine, Meaning, and Social Change in Nineteenth-Century America," in Morris Vogel and Charles Rosenberg, eds., *The Therapeutic Revolution: Essays in the Social History of American Medicine* (Philadelphia: University of Pennsylvania Press, 1979).

While less extreme alternatives existed, the Asylum's own 1840s survey data confirms a substantial number of families using the Asylum to care for their insane relations: 40 percent of insane Friends were treated there. In some cases, families' decisions to turn toward the Asylum resonated with care-taking decisions they had already made. The insane wards of the Pennsylvania Hospital had always received the wealthy and the worthy of Philadelphia's Quaker insane since its eighteenth-century opening. Mordecai Yarnell, the young son of a Quaker minister, for example, had been dragged from the streets of Philadelphia in 1792 to the Pennsylvania Hospital for chronic public drunkenness. The Friends Asylum offered families such as these a familiar confinement, but one within a more homogeneous religious community. It offered a "family" where an insane Quaker "might enjoy the society of those who were of similar habits and opinions." Taking on the Pennsylvania Hospital, the Asylum warned families "that the indiscriminate mixture, which must occur in large public establishments, of persons of opposite religious sentiments and practices . . . was calculated to check the progress of returning reason, and to fix, still deeper, the melancholy and misanthropic train of ideas."[9] Quaker families with relations at the Pennsylvania Hospital responded to this vision of the Asylum. In 1827, after retiring from a distinguished career as a Pennsylvania Hospital manager, Samuel Coates paid the Asylum a visit, and on his tour, he found himself "much gratified in recognizing some of the patients who had formerly been inmates of the Hospital" during his long tenure.[10]

In many more cases, Quaker families who came to the Friends Asylum in the early nineteenth century turned toward an institution for the first time. But these families did not perceive its care as institutional: the rhetoric and the reality of the "asylum as family" resonated with their own beliefs and practices. When planning the care of insane relations, families did not choose between home and a "public establishment." Families chose asylum care because of its

9. For a description of the role of Quakers at the Pennsylvania Hospital, see Frederick B. Tolles, *Meetinghouse and Countinghouse: The Quaker Merchants of Colonial Philadelphia, 1682–1763* (New York: W. W. Norton & Co., 1948) and William H. Williams, *America's First Hospital: The Pennsylvania Hospital, 1751–1841* (Wayne, PA: Haverford House, 1976). Marietta, *The Reformation*, p. 20; *An Account of Rise and Progress*; SD, 31 May 1827.

10. Ibid.

familiarity to the extended kin and social community they themselves might have provided at home.

While the Asylum employed visiting physicians to treat those bodily disorders known to cause insane symptomatology — and while their prescription of a judicious course of bloodletting, for example, could always be counted upon to subdue the behavior of an agitated "maniac" — moral treatment, as originally conceived by the English Quakers and as practiced at the Asylum, was essentially a lay treatment built around the lay ideal of a well-disciplined, well-ordered family. Almost every feature of the Asylum deliberately reinforced this domestic theme. In its architecture, and particularly in the absence of barred windows and locked doors, the Asylum resembled nothing as much as a modest, though large, country home. In its daily routine — with patients participating with their attendant staff in actually running the house and cultivating its farms and gardens — it replicated the normal rhythms of a healthy, balanced, almost idyllic, country life. In its social structure — with patients granted increasing freedom and privileges in return for their willingness to practice rational self-control — the Asylum revamped accepted notions about familial rights and responsibilities, and reconstructed them as treatment strategies. And in its authority structure — with the lay superintendent as the acknowledged head of the family and the patients playing the role of wayward children — it re-created the patriarchical and hierarchical decision-making process known to all Quaker families.

This ethos of domesticity created a more benevolent construct with which to approach the treatment of the insane. The harsh restraint, intimidation, and close confinement previously believed to be the only way to manage the animal-like nature of lunatics was banished from the Asylum's therapeutic armamentarium. Such methods were replaced by those "kind and gentle" treatments designed to prove to the insane that, although parts of their intellect may be deranged, they were still "men and brethren" and still respected participants both in the social life of the Asylum's family, and also in the social life of their own families and communities. Insane patients at the Asylum, in fact, moved easily back and forth between the Asylum's family and their own. Paroles, or passes to home, afternoon teas at neighboring farmhouses, First Day services

at the nearby Meeting House in Frankford all reinforced this ideal of continuing the rhythms of normal family life.[11]

Quaker families, in fact, sent their relations to the Asylum's family much as they might send them to board in the country. It was, though, slightly more complicated to arrange for the Asylum's care of insane relations. The admissions protocol required families to secure a certificate from a physician — preferably the family's physician — attesting to the fact that the individual in question was indeed insane, and that it was "proper" that he or she "be received" as a patient. Armed with this certificate, the family then negotiated a board rate with one of the managers designated to oversee admissions. With the two documents in hand, families could then bring their relatives to the Asylum.[12]

The admission protocols were lengthy and time-consuming, but managed by most families. However, in a significant number of instances, families abandoned the required protocols entirely, and brought their insane relations directly to the Asylum. Families often acted on their own authority to decide that their relatives were indeed insane and, particularly, that they needed the Asylum's care. More importantly, the managers' own admission practices tacitly acknowledged the family's authority to decide issues of insanity and Asylum care. Though the managers constantly reminded families that the medical certificate should be obtained before their own bond for board rate was negotiated, they almost routinely issued orders for the Asylum to admit patients with only the family's promise that medical documentation would shortly follow. Perplexing admission decisions arose only in situations where either it was unclear who would assume the costs of Asylum care, or it was not certain that the patient was indeed a "member or professor" with Friends. The managers made the admission process as easy as possible. To this end, the staff helped these families through the process, asking their own visiting, and later resident physicians, to complete the medical certificate.[13]

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11. This principle of recreated family life was, of course, one of the central tenets of moral treatment as described by Tuke in the *Description*. See also Patricia D'Antonio, "Ideals and Reality: An Historical Case Study of Nursing Care," paper presented at the Rutgers University and Sigma Theta Tau Research Conference, March 1990.

12. Annual Report, HCQC, 1817.

13. For examples, see SD, HCQC, 15 October 1822; 13 May 1824; 10 June 1824; 8 February 1825; 30 April 1831; 11 June 1831; and 25 May 1832.

Interestingly, when medical justification of the decision to commit came after the admission, it always worked to support the family's own decision. In no instance was the family's authority to decide that their relation was insane and in need of the Asylum's care ever challenged by the physician's or the staff's later assessments. There were, of course, some few instances where patients might spend days, even weeks, at the Asylum without ever behaving in ways that would lend credence to their families' diagnoses and decisions. The medical and the lay staff patiently waited, always believing the families' diagnoses correct. In most of these cases, this watchful waiting was rewarded: the patient would suddenly change and show all the behaviors for which the family first sought care. In a very few other cases, the patient, never displaying any insane behaviors subsequent to admission, would be discharged "recovered:" the Asylum staff credited changed associations, healthy diets, and productive employment with having worked an immediate cure.[14]

The medical certificate, though, was not irrelevant to the admission process. The physician had to answer queries about the patient's illness, while the Asylum staff needed to tease out environmental and constitutional causes of insanity, make their own diagnoses, identify useful therapeutics, and summarize yearly statistics. And families, more importantly, needed the physicians' papers to legitimize often anguished decisions to seek the Asylum's care. No matter how familiar the Asylum's care might seem, no matter how strong the continuities between the Asylum's promised care and the care families might provide at home, one real, nagging difference remained. Families could, and did, compel their relations to leave home against their will and accept the Asylum's care. And the Asylum, in turn, agreed to contain these patients. Continuities with boarded care can be too easily overdrawn. Families, quite probably, reasoned, pleaded, and even threatened their insane relations into boarded care, but it is hardly likely that they forced them, for quite simply, patients would leave. Boarded care, in other words, implied that both families and their insane relations had reached some shared sense of its possible value and its potential usefulness.[15]

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14. For examples, see SD, HCQC, 7 May 1824; 9 February 1825; and 28 December 1828.

15. See Tomes, *A Generous Confidence*, for an insightful analysis of the meaning of medical legitimation for families anguishing over the alternative of choosing institutional care for their insane relations.

Families desperately wanted a similar sense of understanding, a similar alliance, with their insane relations when they broached the possibility of the Asylum's care. Catherine L.'s mother, for example, came personally to see the Asylum, hoping she might then be better able to persuade her daughter to come. The Asylum's care, though, did not ultimately depend on any such mutuality between patients and families. Here lay its distinctiveness, its seeming newness, and its appeal. Nonetheless, the final decision to force admission was very difficult for families. Susan K.'s husband, for example, felt "so uneasy" hearing her plead "to try her one night more at home" that he could hardly bear it. A medical alliance, a certificate of assurance that the decision to seek forced care outside the home was right and responsible, eased families' consciences.[16]

Once they admitted their insane relations, the Asylum promised families a new system of treatment, combining the best of moral and medical means to cure insanity. In turn, and in keeping with the best in early nineteenth-century medical thinking, the Asylum asked families to turn over to its care "recent" cases. The duration of the disease, not the particular symptoms or the diagnosis, was the point on which curability turned. "In the treatment of insanity, as in every other disease," the Asylum's physicians warned families, "success is correspondent to the promptness with which the means of cure are administered."[17] The Asylum's managers joined with its physicians in this belief. In anticipation of more patients than available room, preference, they decided, would be given to recent cases. But, much to the staff's regret, such prioritization of admissions never became a reality. Families, by and large, did not apply only for the admission of recent cases during the early years of the Asylum's existence: as frequently, they sent their chronically insane relations there.[18]

The Annual Reports of the Friends Asylum routinely tabulated the duration of illness of all their patients prior to admission. During

16. SD, HCQC, 20 July 1827; 3 June 1824. See also SD, HCQC, 9 May 1824; 4 December 1825; and 24 July 1827. Families also used fairly concrete strategies to get their insane relations to agree to the Asylum's care. Some, for example, proposed that their insane relations consider an Asylum sojourn as no more than an extended visit. Others, playing upon the belief that insane symptoms had their roots in bodily illnesses, suggested the Asylum for its medical therapeutics and its convalescing possibilities. See SD, HCQC, 9 May 1824; 12 February 1826; 26 April 1828; 14 June 1828; and 15 October 1828.

17. Annual Report, HCQC, 1833; MM, HCQC, 18 January 1817.

18. Ibid.

the first few years, 1818–1822, almost all the patients admitted were chronically insane, suffering, on average, more than six years before their families decided to commit them. From the early 1820s and into the 1830s, however, a fairly consistent bimodal distribution of duration of insane symptomatology prior to admission was maintained: slightly more than half of all admissions had symptoms for one year or less and the rest, given the nineteenth century's own definition of chronicity, were chronic cases. The average duration of insanity for all patients prior to admission was three and a half years.[19]

The raw numbers alone seem to suggest that families, in keeping with the Asylum's stated mission, turned to its care both for the cure of recent cases and the melioration of chronic ones. But the data itself masks the significant characteristics of the insane patients themselves. Among the recent cases were many patients for whom little could be done medically, either at home or at the Asylum. Some, in fact, were so exhausted and debilitated from fevers and strokes that they died within weeks of admission. Between 1817 and 1940, 4 percent of all recent cases of insanity died within 12 weeks of admission. The number is small, but the expectation of care families held in these instances is significant. In most cases, wives, mothers, daughters, or sisters stayed with their dying relatives, but they turned the "fatiguing and trying" caretaking activities — the feeding, the turning, the bathing — over to the Asylum's staff. Families, in fact, called on the Asylum's staff for the continu-

19. The Annual Reports of the Friends Asylum, HCQC, routinely tabulated by cases, the age, sex, marital status, duration of illness prior to admission, and the medical diagnosis of their patients. During the first year, 1818, almost all patients admitted were chronically insane. The average duration of insanity for its first 19 patients was 8.3 years; only two patients had symptoms measured in weeks or months. By 1822, though, a fairly stable pattern of admissions emerged. In that year, the average duration of symptoms prior to admission for all patients began dropping (6.5 years) as 42 percent of all patients admitted had symptoms of less than a year's duration. This pattern holds in 1829's summary statistics for all patients treated between 1822 and 1829: the average duration of symptoms dropped further to 3.7 years, and 53 percent of patients admitted had symptoms of less than one year. Beginning in 1833, the Annual Reports separated new admissions from those patients admitted in earlier years, but still patients. In that year, the average duration of symptoms prior to admission for new admissions was 2.3 years and 60 percent of all new admissions had symptoms of less than one year. From the mid-1830s through the early 1840s a fairly consistent bimodal distribution of duration of insanity for all new admissions was maintained. On average, 57 percent of all new admissions had symptoms for less than one year; 31 percent had symptoms for over two years; and the average duration of symptoms for all new admissions was 3.5 years.

ous, intensive care they would have had to provide in their homes relying on relatives, friends, or hired strangers. And the staff provided relief by taking on the actual physical care of the sick and dying insane, unburdening often overwhelmed families.[20]

Even more telling among recent cases were those patients with multiple admissions. Some carried diagnoses of "periodical insanity": each year they would be admitted within weeks of their symptoms' recurrence, discharged "restored" after months of treatment, and readmitted as a recent case the following year. Many others had one, sometimes two, readmissions with recent symptomatology before their families decided either to commit them to the Asylum for years of long-term care or to explore other care-taking alternatives at home. Readmissions, in fact, were somewhat common in the Asylum's early years. Approximately 18 percent of all patients admitted between 1817 and 1840 had more than one episode of Asylum care.[21]

Readmission rates have, of course, been used by both late nineteenth-century asylum critics and by historians to underscore the hollowness of the Asylum's promise to cure insanity. But readmission rates stand as a signal of failure only when it is assumed that the Asylum's overarching mission lay only in its promise of a medically-driven cure. The fact that families did readmit their insane relations, repeatedly indulging in a fairly expensive option, suggests they believed the Asylum offered more than a cure: it was also for them a respite from the burden of daily care during their relations' episodic periods of disruptiveness and unmanagability.[22]

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20. This analysis is based on case reports in the Superintendents' Diaries, 1818–1840. It includes patients such as Mary W. who died at the Asylum, five weeks after her admission, surrounded by family grateful for the "unremitted attention" of the Asylum's female staff. It also includes patients like Benjamin R. whose wife's demands during his final illness left the staff "nearly worn out with fatigue and lack of sleep." SD, HCQC, 13 March 1821; 10 June 1824 through 18 July 1824. For examples, see also 26 June 1818; 28 June 1820; and 24 June 1822.

21. Tabulated case reports, SD, HCQC, 1818–1840.

22. For an example of a late nineteenth-century critique, see Pliny Earle, "The Curability of Insanity," *American Journal of Insanity,* 1877, *33*:483–533. Earle, a physician and a well-respected asylum superintendent, used statistics from the Friends Asylum to advance his argument. Of interest in his statistics is a 20 percent readmission rate among all patients admitted to the Asylum between 1818 and 1875 with symptoms of less than one year's duration. Earle's interest in asylum statistics, however, surfaced long before the 1870s. In 1842, during his short tenure as a resident physician at the Friends Asylum, he reworked the Asylum's statistics to reflect the treatment of persons, not cases. He found 21 percent of all recent cases admitted to the Asylum were readmissions. For an historical critique of the "cult of curability," see David Rothman, *The Discovery of the Asylum.*

Among more chronic cases, the tenuous hope families held for an eventual cure was secondary to their wish for some longer term alternative to home care. These families wanted a home for their chronically insane relations, perhaps for months, or perhaps for a lifetime. The Asylum's lay staff could join with families around this need. The Asylum as home did not preclude the wish or the hope for an eventual cure in the face of chronicity. Yet, families and staff interpreted the range of conditions suitable for the Asylum's care in different ways. Families included among those relatives "without reason" not just those with positive signs of insanity, but also "idiots," "imbeciles," and epileptics. They sent to the Asylum patients like Lynn B., whose "ungovernable" temper came from the fact that she was "not only deprived of the use of her reason, but of reason altogether." The Asylum's staff found these patients extremely trying. It was not just the physical care needed, though few of the idiots and imbeciles could toilet, bathe, or fully dress themselves. Nor was it the time and the patience that had to be invested in their care, though epileptic patients could rarely be left unattended. Many chronically insane and suicidal patients needed the same kinds of care. Yet with both the chronically insane and the suicidal patients, the staff could still hold to the belief that the time and the specialized care provided only at the Asylum would eventually cure the symptoms of insanity, if not necessarily the disease. A filthy insane patient, for example, had enough remaining reason to understand and respond to the threat of the shower bath; a filthy idiot could not. The admitted hopelessness of idiots, imbeciles, and epileptics shattered the veneer of specialized skill the Asylum's lay superintendents, matrons, and attendant staff held to dearly to sustain their day-to-day satisfaction with their work.[23]

Indeed, the Asylum's staff claimed a mission of treatment, however illusory the promise of cure might seem with chronically insane patients. They claimed an impersonal expertise, grounded in the idea of the Asylum as a special form of care which, though it recreated a sense of home and family, could not be replicated at home. They drew on their role as managers of a unique healing environment for their authority to define what might be most appropriate in such an environment. But in admitting idiots, imbeciles, and epileptics, managers and families joined to challenge the staff's

23. SD, HCQC, 3 March 1820; 30 November 1822 through 20 April 28; MM, 13 March 1826.

right to claim only a special expertise. Families claimed, and the Asylum managers recognized, a more potent and, in the early nineteenth century, a more socially legitimate authority than that of mere expertise. They claimed an authority, not unlike that on which boarded care was built, based on the worthiness of their own needs and, more importantly, on their personal knowledge of what both they and their relations needed. Despite the reality that the care of those incurable patients cast staff in the disconcerting role of hired help to the family, this was the innate logic which made the promise of asylum care intrinsically appealing. While Quaker families certainly hoped the Friends Asylum might cure their insane relatives, they expected the Asylum's already assembled hired staff to relieve them of the tiresome, daily burden of the physical care and attention needed by their relations. They expected the Asylum's staff to do the "dirty work" of care at a time when ideas of how to best nurse the sick were being reworked at home.

In households of early nineteenth-century Philadelphia, the nursing of family and friends took place at home because most sickness, birthing, and dying centered there. In a world where women's domestic duties were tied tightly to social ideas about their innate capabilities and their moral responsibilities, such nursing was almost an unquestioned part of their lives. But with industrialization, the emerging wage-labour market of the middle-class home slowly reworked ideas about how the moral duty of women to care for their sick family members would find its form in the actual work of nursing. Popular nineteenth-century ideas about domesticity gave women control of the home, but they did not ask that they actually perform the physical labour required there. Rather, "ladies" would supervise the delegated tasks of their working-class "help." The growing genre of domestic medicine and nursing manuals, manuals which often included specific advice on the nursing care of the "nervous and the insane," spelled out the appropriate division of labour for the middle-class sick room. The physical work of caring for the patient — the bathing, turning, cooking, feeding, and the administration of treatments — would be the work of the hireling. Work requiring judgement and intellect, such as supervising the conduct and the deportment of the hired nurse, watching for changes in the course of the disease, attending to the labile disposition and temper of the patient, would be the work of "ladies." This reordering of care encouraged the splitting off of the "dirty work"

of nursing — the physical, hands-on care — from the more genteel responsibilities of assessment, planning, and supervision.[24]

The structure and the staff of the Friends Asylum created an opportunity for Quaker families to relinquish some of the more emotionally and physically taxing burdens of nursing at a time when it was more socially appropriate to do so. Yet, at the same time families cast off this piece of care, they claimed the right to supervise the kinds of care their insane relatives received at the Asylum. In many respects, the anxieties the staff felt about the blame families might lay at their doorsteps effected an ambivalent acknowledgement that families had the right to claim such a role. Certainly, the domestic rhetoric of the early nineteenth century's reordering of care gave families, and their women in particular, just such a role. But, in thinking of the Asylum as a self-contained family for the duration of specialized treatment, both managers and staff had assumed that the particular responsibility for supervision would be theirs alone. The managers, in their weekly visits, would supervise the overall conditions of care and treatment; and the superintendent, in his day-to-day role as patriarchical head of the Asylum's family, would manage the patients and staff.[25]

Families, though they generally trusted these more structural forms of oversight, also insisted on their own, more personal supervision. They thought of the Asylum as their own, albeit extended, family, and claimed the right to challenge the patriarchical authority of the superintendent. More concretely, families insisted on the right to visit their insane relations — to assess their progress, to judge their satisfaction with the Asylum's care, to soothe their anxieties about being away from home — whenever they pleased.[26]

Visits in fact, were a part of the day-to-day routine of Asylum life. From its opening, the superintendents and their staff had assumed families would want, and should be able, to visit their insane

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24. See, for example, Robert Wallace Johnson, *Friendly Cautions to the Heads of Families and Others Very Necessary to be Observed* (Philadelphia: James Humphreys, 1804); Joseph Warrington, *The Nurses Guide* (Philadelphia: Thomas Cowperthwait, 1839); Anthony Todd Thomson, *The Domestic Management of the Sick Room Necessary in Aid of Medical Treatment* (Philadelphia: Lea and Blanchard, 1845).

25. SD, HCQC, 5 December 1823; 5 October 1826; and 10 May 1830.

26. See, for example, SD, HCQC, 1 August 1821 through 20 November 1822; 9 July 1825; 17 November 1829; and 2 June 1831. It must be noted that the Asylum's staff and families worked fairly effectively together. Collaboration and consensual decision-making were the backbone of Quaker social and religious life.

relations. The story of the York Retreat, founded after a young Quaker woman mysteriously died in a public asylum after her friends had been refused the right to see her, was too much a part of Quaker consciousness for visits to ever be denied. Visits from family could be, as well, helpful gauges of patients' progress. Or, as with Patricia D. whose family found nothing amiss "but her natural bad temper," a visit could even confirm, the superintendent later wrote, "that a recovery was effected without our being aware of it."[27]

In many respects, families used the openness and ease of Asylum visits in ways which resonated with the other caring options they had available to them: families came and went much as they might have had they chosen boarded care for their insane relations. If they travelled far, they spent the night at the Asylum; if families themselves could not travel, they sent other in their kin network to visit their relatives, consult with the staff, and write back to them. Families, of course, used their visits to ease the dilemma of choosing the Asylum's care over that of families, friends, and hired help. But more importantly, the very presence of families at the Asylum served to blur the boundaries between home and institution, much as did the social visits home by the insane relations. Visits bridged the space between home and asylum, bringing the two heads of the family together, under one roof.

It is hardly surprising, then, that visits emerged as the single, most conspicuous source of tension between the staff's institutional claim to manage their family, and the families' socially legitimate claim to supervise the care of their own. No matter how benignly each new superintendent and attendant might first see families' visits, they inevitably grew to dread many of them. "I should be glad," wrote one, "if those who . . . have their friends with us could be satisfied with seeing them only when we believed it suitable."[28] Some visits, they felt, not only disrupted the therapeutic rhythms of day-to-day life, but they also left the patients more distraught, more "frantic and ungovernable" than ever. Visits, at times, left the families themselves discouraged, distressed, and challenging the value of the Asylum's planned treatments. Visits crystallized the inequity of power between staff and families. In an era when per-

27. SD, HCQC, 23 November 1822. See also 7 June 1819; 16 November 1822; and 24 May 1831.

28. SD, HCQC, 6 July 1819; 7 June 1827. For tensions around visits, see SD, 6 July 1819; 16 November 1822; 27 April 1824; 3 October 1830; and 8 June 1831.

sonal knowledge carried more authority than lay claims of expertise, the authority vested in the superintendent, as head of the Asylum's family, paled in comparison with that of the patients' immediate family. Neither the superintendent nor the staff could, in fact, flatly deny families the right to see their relations. As lay men and women themselves, their arguments about specialized care all fell on seemingly deaf ears.[29]

In many respects, the early nineteenth-century ideal of moral treatment itself, built as it was around the intuitively familiar metaphors of family and normal family life, unwittingly conceded that there were kinds of authority more powerful than that ascribed to any institutionally defined role. Families had a firm place in the Quaker social structure: they were institutions, in and of themselves, charged with nurturing the seeds of righteous living among the community's members. In turn, familial authority, guided by the norms of enlightened discipline, protective caring, and guarded social experience, had been carefully emphasized in the Quaker religious code of rights and attendant responsibilities. In the early nineteenth century, the very nature of familial authority drew less from notions of impersonal, technical skills than from deeply-embedded ideas about the value of personal knowledge and shared experience.[30]

Thus, when families turned to the Friends Asylum in the early decades of the nineteenth century, they saw not only another family to help with the care of insane relations; they also saw an idea of care that supported their traditional authority to determine what kinds of care both they and their insane relations needed. And, much to the chagrin of the Asylum's physicians, medical expertise, like the staff's own authority, had to compete with the families' felt authority to determine how the promise of the Asylum would mesh with their own needs, their sense of their insane relations' needs, and the familiar resources available to them in their community. The Asylum's families, in fact, rarely shared the medically progressive opinion that their relations should stay at the Asylum through a

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29. Ibid.

30. Some of the major studies that address Quaker family life include: Philip S. Benjamin, *The Philadelphia Quakers in the Industrial Age, 1865–1920* (Philadelphia: Temple University Press, 1976); Sidney James, *A People Among People: Quaker Benevolence in Eighteenth-Century America* (Cambridge, MA: Harvard University Press, 1963); J. William Frost, *The Quaker Family in Colonial America: A Portrait of the Society of Friends* (New York: St. Martins Press, 1973).

lengthy convalescence until their cure was established. They believed in treatment only to the point where their relatives were manageable at home. And, much to the disappointment of the Asylum's physicians and staff, they took their relatives home when they had reached that point.[31]

Historians have argued that the nineteenth century's greater emphasis on home and family as both a "haven in a heartless world" and as an "oasis of stability" in a rapidly changing industrial society can be linked to the rise of the asylum movement in the United States. Between 1750 and 1850, as production moved out of the home and into factories, families, through their women, took on new responsibilities. The separation of home and workplace recast families as the vehicle through which children would be socialized to the more exacting norms of industriousness and self-discipline, and through which all would experience more intense, more spiritually uplifting, and more socially-bounded emotional relationships. Little room, and even less tolerance, remained for the noisy, filthy, disruptive, and disturbing symptoms of insanity. The insane threatened this tightly-ordered vision of domestic tranquility. The asylum grew as an institution in the nineteenth century because it promised a morally acceptable and medically justifiable alternative to the care of the insane at home.[32]

Yet, Barry Levy, in his study of Quaker family life in the Delaware Valley, argues that the radical religious principles of seventeenth- and eighteenth-century Quakerism forged an ideal of morally self-sufficient, child-centered, female-empowered domesticity among Friends long before the forces of the marketplace challenged more traditional forms. Nineteenth-century family reformers, in fact, romanticized the Quaker vision of families and recommended it as a model of how bounded domesticity could produce both civic virtue and economic prosperity. It is quite possible that the Friends who gathered in 1817 to form the Asylum at Philadelphia, heirs to generations of intensely privatized and emotionally intense families, simply were the first to have to con-

31. MM, HCQC, 11 March 1822; Annual Reports, 1834 and 1843.

32. Some of the major studies that address changing family life in the nineteenth century include: Mary P. Ryan, *Cradle of the Middle Class: The Family in Oneida County, New York, 1790–1865* (Cambridge: Cambridge University Press, 1981); Katherine Kish Sklar, *Catherine Beecher: A Study in American Domesticity* (New Haven: Yale University Press, 1973); Barbara Welter, "The Cult of True Womanhood: 1820–1860," *American Quarterly,* 1966, *18*:151–174. For the link between changing family function and insanity, see Tomes, *A Generous Confidence.*

front one of the thornier problems of domesticity: the care of the insane. Certainly, in their vision of asylum as family, these Quakers were recreating their intimate household ideal for brethren who challenged the tranquility and the purity of their own families, but who could not, in good conscience, be disowned.[33]

The Quaker ideal of domesticity flourished in the eighteenth-century Delaware Valley, along with enough private wealth among Friends to support insane brethren outside the home. The Friends Asylum, though, was a nineteenth-century creation. The ethos of domesticity and the financial means to afford its recreation in a family outside the household were critical to a vision of asylum treatment, but, this paper argues, they were not in themselves sufficient. For an institutional venture such as this to have been attempted, let alone successful, the idea of asylum treatment had to draw upon a peculiarly nineteenth-century phenomenon: the reordering of nursing care at the bedside of the patient.

It would, of course, be a mistake to underestimate the power of the ideal of moral treatment. Yet many of the families who first turned to the Quaker Asylum in the early nineteenth century did not perceive its care as either new or radical. The idea of asylum as family resonated with their own beliefs and practices. It created a social space within which families could articulate their own needs and wishes. And it legitimated the authority of families to recreate at the Asylum the kinds of care they believed necessary. Middle-class Quaker families negotiated easy, loose boundaries between home and hospital which made its care seem less like the expulsion from one family than an introduction to another, extended one. Families determined who among their insane relations needed the Asylum's care, and for how long. And they used the Asylum to replicate the same division of labour around caring for the insane that, ideally, governed the care of the sick at home.

For moral treatment as an idea came with few guidelines about the interface between the ideal of treatment and the reality of families' needs for particular kinds of help with their insane relations at home. Within the space between the ideal and the reality, the Asylum and its families negotiated a kind of care which seemed less new, than persistently familiar.

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33. Barry Levy, *Quakers and the American Family: British Settlement in the Delaware Valley* (Oxford: Oxford University Press, 1988).

Acknowledgments

The Research for this paper has been supported by grants from the National Institute of Mental Health and the American Nurses Foundation. I wish to thank Joan Lynaugh, Nancy Tomes, Charles Rosenberg, and Michael Katz for their generous comments on earlier drafts.

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"Dearest Maria": Letters From a Medical Student in Philadelphia to His Fiancee, 1845–1846

THOMAS A. HORROCKS
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"One of our number having departed this life on last Sabbath, our different schools have suspended operations this afternoon to give the students an opportunity of attending his funeral." So David William Lewis informed his fiancee Maria, who lived in Western Pennsylvania (presumably in Indiana County), of the recent death of his Jefferson Medical College classmate, Alexander Gillfillan. On this somber note, David William Lewis opens the first of a series of seven letters to Maria, written over a four-month period, from December 1845 to April 1846. Recently acquired by the Historical Collections of the Library of the College of Physicians of Philadelphia, these letters describe Lewis's life as a medical student in Philadelphia and the beginning of his private practice in Ebensburg, Pennsylvania. Six of these letters (five written in Philadelphia) have been transcribed and are presented below.[1]

Little is known about the life of David Lewis. He was born in 1822 or 1823 and lived in Indiana County, Pennsylvania. Lewis first appears in Jefferson Medical College's student register in the fall of 1844. After two years of lectures and the completion of a dissertation on the pulse, he received his medical degree along with 169 other graduates on 24 March 1846. After receiving his M.D., Lewis began a six-month partnership with Dr. Michael A. T. A. Rodrigue in Ebensburg, and probably assumed the practice in late 1846 or 1847. Lewis died at the age of 51 in Pittsburgh, Pennsylvania, on 9 November 1873.[2]

1. The seventh letter, written by Lewis in Ebensburg on 3 April 1846, was omitted because it concentrated solely on personal matters.

2. The biographical information on Lewis was found in the *Medical & Surgical Reporter*, 1873, 29:418 and Lisabeth M. Holloway, comp., *Medical Obituaries: American Physicians' Biographical Notices in Selected Medical Journals Before 1907* (New York: Garland Publishing, 1981), p. 270. The authors wish to thank Judith A. Robins, Archivist of Thomas Jefferson University, for information regarding Lewis and Jefferson Medical College.

Transactions & Studies of the College of Physicians of Philadelphia Ser. 5, Vol. 12, No. 3 (1990); 367-385
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Although Lewis's letters to Maria contain lengthy passages that are romantic or religious in tone, his writing does provide a glimpse of what it was like to be a medical student in Philadelphia during the mid-1840s. The five letters from Philadelphia relate Lewis's impressions of Jefferson Medical College and its faculty and students; his anticipation of graduation and starting a practice; how he spent his leisure time; and his reactions to major events in the city, such as the smallpox epidemic in the winter of 1845–1846, the imposing funeral of Jessie Duncan Elliott, the appearance of the celebrated missionary, Adoniram Judson, and the exhibition of the *Hydrarchos,* an antediluvian monster.

Like many students then and now, Lewis had little money. For example, he had to miss Gillfillan's funeral because he could not afford to purchase "suitable mourning for the occasion." He lived in a boarding house on 41 George (now Sansom) Street, sharing quarters with Terrence J. Cantwell, who, like Lewis, was from Indiana County. Cantwell was a medical student at the University of Pennsylvania. Considering the bitter rivalry between the two schools, Lewis's relationship with Cantwell seems to have been at least a cordial one. Perhaps the ill will between the two institutions existed more in the minds of the professors than the students. The fact that both of the schools closed for Gillfillan's funeral may also suggest a camaraderie between Jefferson and Pennsylvania students.[3]

Although we do not know whether Lewis eventually married his "dearest Maria," we do know that he died at a relatively young age. The fact that his death warranted a notice in a medical journal indicates that he had a successful practice.[4] Thus, the letters presented complement the Historical Collections' extensive holdings of lecture notes from Jefferson Medical College. More importantly, they acquaint us with a struggling medical student-turned young practitioner who, up to the discovery of these documents, had been all but forgotten.

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3. For a concise review of the Jefferson-University of Pennsylvania rivalry, see Whitfield J. Bell, Jr., *The College of Physicians of Philadelphia: A Bicentennial History* (Canton, OH: Science History Publications, 1987), pp. 192–195. At this time, the two schools were located within blocks of each other. Jefferson was at 56 South Tenth Street, and the University was located on Ninth Street above Chestnut.

4. *Medical & Surgical Reporter,* 1873, 29:418.

Letter Number One

No. 41 George St., Philad. Dec. 11th 1845 [Thursday]

Dearest Maria,

One of our number having departed this life on last Sabbath, our different schools have suspended operations this afternoon to give the students an opportunity of attending his funeral. Not being able for want of the expected remittance of funds to purchase suitable mourning for the occasion, I have thought it advisable to remain at home and Terrence being absent, I embrace the opportunity afforded of inditing a few lines to you by way of whiling away the tedious hours of separation.[5] Nothing except the reading of your letters affords me as much pleasure as the perusing of my thoughts addressed to one so much & so dearly beloved. It seems a long time since I heard from you and the last has been handled and read so often that it will, I fear, be soon worn out unless I resort to the expedient of my youthful days so frequently enjoined upon me as a means of preserving my spelling book.

Although the pleasure derived from occupations of this kind is so great when the thoughts are yours and exists but in a much less degree when occupied by the cogitations of others, yet I seldom can derive any pleasure from these sources for lack of opportunity, for will you believe me when I inform you that the only letters I have received from my Indiana friends has been one from Geo. Hill, & it was delayed until yesterday. Does not this look like friendship? This being my only source of happiness and it withheld. But there arises a question. Is any great amount of happiness to be expected in this world? Judging from the experience of others as well as our own and the declarations of Scripture together with the dictates of reason reflecting on the constitution of the soul when applied to happiness emanating from terrestrial creatures, we must answer No. Ask the votary of pleasure if every rose of gaiety & vivacity does not contain the thorn of disappointment and regret, and will

5. Terrence Joseph Cantwell received his medical degree from the University of Pennsylvania in 1850. *Catalogue of the Alumni of the Medical Department of the University of Pennsylvania, 1765–1877* (Philadelphia: Society of the Alumni of the Medical Department, 1877), p. 27. According to one of Lewis's letters, there were other students living in the boarding house on 41 George Street. One of those students, Edgar Janvier, from New Jersey, was also attending the University. "University of Pennsylvania, Matriculating List for the Medical Department, Session 1845–1846," photocopy in the Historical Collections of the Library, College of Physicians of Philadelphia.

he not answer Yes? Does money confer happiness Does it not also bring care and trouble Does the pursuit after science afford the votaries of that Goddess some hours of satisfaction & delight It certainly does, but may not the most earnest devotee weep and mourn when he reflects upon how small are the advances he has made though whole years have been consumed in the acquisition of what he possesses? But what says Solomon. Vanity of vanities, vanity of vanities, all is vanity. And when we reflect upon the spiritual essence of man, the thinking principle which truly is the man himself, how could we suppose that for one moment spirit could be satiated with material enjoyments For what is spirit, an emanation from God, we may perhaps say, a part of the Deity himself, at least partaking largely of his nature. Then why should it be satisfied with anything short of the full enjoyment of him & that eternally? Strange it is that being so often disappointed we still grasp after phantoms, still pursue shades, still hope against hope, & still cry out, Lo! here the tree of happiness. And even those who admit that, in the ways of wisdom, pleasure only is to be found, are often seen deviating widely from her paths, drawn aside by worldly allurements, and though with sorrow returning to the paths of rectitude, yet they have no sooner regained their position than they again fly off in a tangent to return in sorrow as before. With this melancholy experience of others and ourselves, we might be led to despair did we not believe him to be unchangeable who has said "My grace is sufficient for thee" as well as "Ask & ye shall receive." Keeping these promises of the immutable God ever before us, may we be led so to strive that we shall obtain, so run that we shall win. Looking not for happiness from earthly things & enjoyments, we shall not be disappointed, but shall end our run with the entrance upon the full fruition of all that the Almighty has ever promised to his faithful followers. Yea, more than we can now even anticipate, for he has said "Eye hath not seen, nor ear heard, nor hath it entered into the heart of man to conceive the joy which God hath prepared for those who love him."

I was much affected by hearing of the death of James Turner, how suddenly called to appear at the tribunal of his Judge, was he prepared to hear him say, "Come, ye blessed," etc. I hope he was. I have heard no particulars except that he suffered great bodily anguish. May it be a warning to us all so to live that though given but a moment's warning, we may be ready to respond. Even so, come Lord Jesus. I received an affectionate letter from Geo. Hill contain-

ing an account of his death and also an earnest admonition to myself which I hope has not been lost. I know I have not lived as I should. I have often resolved to live a more holy life and devote myself more to God than I ever did before, but my resolutions have been like the morning cloud and the early dew. And although I have endeavoured to place my dependance upon God, my resolutions have hitherto failed. But I hope hereafter to be more successful and to strive more earnestly than I have ever done hitherto.

You must forgive me if these topics are not interesting to you & if I give you no news, for I believe that nothing has transpired of any interest since I wrote you last. I am pursuing the even tenor of my way without interruption by sickness or any other cause, & I am daily gaining knowledge and hopes of being worthy of an M.D. in the spring. I may mention that Cantwell has been unwell with a sore throat that has prevailed among the students from which, however, I have been exempt. He has now recovered and is able to attend lectures. The student who died was afflicted with typhoid fever arising from exposure outside the stage while coming to the city. His name was Gilfillen [Alexander Gillfillan], a resident of Monongahela City, Allegheny Co., Pa.

When you write, direct to Jefferson Medical College, Tenth St., I can get them without observation there as Terrence attends the University, and I am ashamed to ask at the P. O. any more without receiving from anybody.

Write at least once in two weeks without waiting for me to answer yours, and send a paper occasionally, as it does me good to see anything coming from you. One who loves you truly,
D. W. Lewis

Letter Number Two

No. 41 Geo. St., Philad. Dec. 15th 1845 [Monday]

Dearest Maria,

Your second letter has just been received this morning, and though I have written four to you, I cannot let yours remain in hand without giving you something by way of an answer. For if you derive the least possible pleasure from perusing my epistles, I hold it to be my *duty* as well as one of my greatest pleasures to contribute to your happiness by this means, and the more so when by so doing I am enabled to derive a pleasure from the act myself.

As to my being able to return by the first of March, I fear that I have not sufficient influence with the Prof. to obtain leave of absence from the commencement.[6] The principal argument I should have to urge would be my absence from you, and I fear that seven old grey-headed men would consider it a youthful weakness, not being able to enter into our feelings on the subject. But be this as it may, I intend to speak to the Dean on the subject, pleading as my reason something which may have more weight onto there [sic] callous and obdurate hearts.[7] You may be assured it is my desire to leave as soon as possible, and was it in my power, I would return during the Christmas holidays, but this cannot be thought of. In any declarations I have made, you could not have thought me capable of duplicity, and as for overvaluation in my mind, for when man *loves*, the object cannot be weighed in the balance with all earthly treasure.

As to the fear of presumption on your part, I can say that I have signed over all right, title, interest, and claim to myself in lieu of a very valuable consideration, and though I am opposed to all knavery, I always like to have the best of the bargain if there is any difference, and in this case, I think yes, I know that the contract is evidently in my favor, though I hope you may sustain no considerable loss, and it shall always be my effort to make your property as valuable as it is possible to do, & though it may turn out like the Africa deserts, utterly untillable, I still hope that like the great Sahara, some oases may intersperse their verdure among the sands around.

As to old Seneca, you know we live in the age of steam galvanism & gas and our old forefathers' axioms are daily contradicted, but I must acknowledge there is a good deal of truth in his saying. You ask for the whole particulars; these will be found on referring

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6. According to the regulations of Jefferson Medical College, a student was required to attend the commencement exercises in order to receive his degree. A student had to be granted special permission by the faculty to be absent from the commencement. *Catalogue of the Faculty and Students of Jefferson Medical College of Philadelphia, for the Session 1845–1846, With a List of March, 1845* (Philadelphia: Jefferson Medical College, 1846), p. 16.

7. Robert M. Huston (1795–1864) received his medical degree from the University of Pennsylvania in 1825. Besides serving as Dean of the Faculty at Jefferson, Huston was professor of obstetrics and diseases of women and children (1838–1841) and professor of materia medica and general therapeutics (1841–1847) at the medical school. Howard A. Kelly and Walter L. Burrage, comp., *Dictionary of American Medical Biography* (Boston: Milford House, 1971 [originally published in 1928]), p. 624, hereafter cited as *K&B*.

to my third letter which I presume you have received ere this. I can therefore give you but little more. You say do not go to the theatre, which cuts off a great part of the particulars which might be noted. I might, you know, be able to get into some company the end of which would be the watch house, & then I could tell you that I had my name in the "Ledger", etc.

As to my getting a Diploma, I have daily more hope of this, & I have the consolation of perceiving that few of the candidates for graduation know much more than myself, and some of them much less.

You mention the proposed marriage of [Samuel?] Wallace. I do not know the lady, but think that I have seen her once at Mr. Johnston's. I hope she may make a good wife, for I think he deserves one. A Good Stepmother is one in a thousand, though there are cases, as I myself have experienced.

I am glad to hear that your country is possessed of a general gallant, a very convenient article for the ladies, although for my part, I should not like the station except in this particular instance, & then I suppose that my attentions would be considered special. Tell Jane I think it a pity that she did not encourage the attentions of Mr. Mc. at least until this snow was over.[8] I despise coquetry, but in this case, it might perhaps have been justifiable. We have had no snow here except about two or three inches but have had a good deal of its equivalent, rain.

I had to leave this *interesting* sheet about an hour since to attend a lecture which is now over. A vacant hour having occurred in consequence of Prof. Meigs being unable to meet us, I again resume the pleasing duty.[9]

I am thankful to your mother for her good wishes & also her kind admonition which shall be attended to. Tell Cousin Martha

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8. Francis M. McConaughy, who was from Westmoreland County, Pennsylvania, graduated from Jefferson Medical College in 1846. W. J. Maxwell, comp., *General Alumni Catalogue of Jefferson Medical College 1917* (Philadelphia: Jefferson Medical College, 1917), p. 80.

9. Charles D. Meigs (1792–1869) was one of the leading figures in American obstetrics and gynecology during the first half of the nineteenth century. He received his medical degree from the University of Pennsylvania in 1817. From 1841 to 1861 he was professor of obstetrics and diseases of women and children at Jefferson Medical College. A popular teacher and a prolific author, Meigs was violently opposed to the use of anesthesia in childbirth and the concept of the transmission of puerperal fever. Martin Kaufman, Stuart Galishoff, and Todd L. Savitt, eds., *Dictionary of American Medical Biography, Vol. 2* (Westport, Connecticut: Greenwood Press, 1984), pp. 510–511, hereafter cited as *DAMB*.

her fears, if they be such, are too true. I have fallen deeply in love with a certain city bell[e] residing in our house & though not enamored by beauty, that the voice is music in my ear at least when hear[d] at stated intervals three times a day, summoning me to the banquet prepared by other hands. The only period at which I have noticed any discord is when, in well-understood tones, I hear proclaimed "Arise from thy bed, thou sluggard." You may if you like tell her that I am sorry if she *knows* how young students forsake their *pretended* love.

Two of our Professors have been quite unwell all last week, depriving us of their lectures, one having had the gout & the other a severe cold. We expect Mütter[10] to meet us tomorrow & Mitchell,[11] the other, was out today.

The only item of any importance in city news has been the death of Com[mander]. Elliott of U.S. Navy which took place last week.[12] He was buried on last Saturday in great pomp & splendor, poor man, what will earthly fame avail him in his present condition, with what contempt must he look down upon the folly of his fellow mortals. It was, however, an imposing spectacle, all the volunteers were out in full uniform, some of them most splendid-looking men. The thought occurred to me: "What a pity it would be to see such men lying dead on the field of battle."

I can tell you little of what might be called the curiosities of the place as I have had not time to visit them, but perhaps after Christmas week, I may be able to give you some descriptions which may prove interesting. But I have come to the end of my sheet & must conclude. Remember me to all at home, and rest assured of

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10. Thomas D. Mütter (1811–1859) was professor of the institutes and practice of surgery at Jefferson Medical College from 1841 to 1856. He received his medical degree from the University of Pennsylvania in 1831. Mütter is best known for the large collection of anatomical and pathological specimens he gave to the College of Physicians of Philadelphia. Today, the Mütter Museum of the College is known throughout the world; *K&B*, pp. 896–897.

11. John Kearsley Mitchell (1793–1858) taught the practice of medicine at Jefferson. He received his medical degree in 1819 from the University of Pennsylvania. He was the father of S. Weir Mitchell (1829–1914); *DAMB*, vol. 2, p. 529.

12. Jesse Duncan Elliott (1782–1845) was in command of the Philadelphia Navy Yard at the time of his death. Although he was cited by Congress for his heroism during the War of 1812, Elliott's career was a controversial one. He was suspended from the United States Navy for a time during the late 1830s and early 1840s. Allen Johnson and Dumas Malone, eds., *Dictionary of American Biography, Vol. 6* (New York: Charles Scribner's Sons, 1931), pp. 96–97, hereafter cited as *DAB*.

the fact that I remain now as ever your own true & unchangeable, David W. Lewis

Write often & direct to Jef. Med. College, Tenth St.

Letter Number Three

No. 41 George St., Philad., Jan'y 7th [1846] [Wednesday]

Dearest Maria,

Your welcome letter of the 1st was received a few moments since, and I take my seat immediately to reply, though it was only yesterday I mailed my reply to your last which was received on Monday. But as Cantwell has gone to college, and it will be an hour before our College opens, I embrace this as the most favorable opportunity which may offer.

I was not aware that I had mentioned to you the death of any of our number, because I knew that, had you been in the midst of a fatal epidemic, my feelings would have been intolerable. No other deaths have occurred, though there have been many cases of disease surrounding us on every hand. But thanks to a merciful God, I have hitherto been preserved, and the virulence of the pestilence is now abated, and I hear of no new cases. I speak of the smallpox,[13] the deaths from which have averaged about 22 per week notwithstanding the preventive has been within the reach of all, but some their [sic] are too wise to profit by the advance of science, and others believe it wrong voluntarily to contract the disease of a beast. But some there were who, having used the preventive vaccination, were still attacked, though in a milder form. There is, however, no danger to be apprehended now.

I have been enabled in some measure to keep the resolutions I have formed, though I am far from being what I would wish, but I still hope that by the assistance of the Holy Spirit, I may "Grow in grace" & at last be "made perfect in holiness." You may be sure

13. According to the 1845 report of the committee on meteorology and epidemics of the College of Physicians of Philadelphia, December of that year "presented a melancholy record of ninety-two deaths from this loathsome malady." "Taking the sum of the weekly reports of deaths from small pox," the report continued, "one hundred and eighty-seven persons appear to have been carried off by this disease [during the year]. The ravages have been considerable, and the consequent dismay throughout the city and adjoining districts has been severely felt." The report did conclude, however, that the mortality from smallpox for the year did not equal "what was observed in 1824 and in 1841." *Summary of the Transactions of the College of Physicians of Philadelphia,* 1841–1846, *1*:411.

that I shall not feel any restraint at any time in speaking to you about my spiritual welfare, for I know that I address one who will take an interest in anything which concerns my welfare and especially that relates to the salvation of the soul.

I am happy to hear that you are at least doing something for the cause of temperance and sobriety, though I fear that many of those who endeavor to convert the world and especially the intemperate run madly wild in their enthusiasm. And I think, or I fear, that there is at the present day more harm than good done in that cause. John writes me of a temperance meeting in Columbus, and he is of the same opinion with regard to their temperance men. They passed many resolutions, as he thinks, with more zeal than knowledge. One of them referred to petitioning the Legislature in regard to putting down all licensed houses. I am, in this, of his opinion that it is somewhat doubtful whether we have yet attained that point in which the government should interfere. Perhaps we have, but it is a matter for reflection. Those men who will drink will keep it, and if they construe it into persecution, there may be more used than is now, & there is always means found to avoid the law. You may rest assured that I am as much of a temperance man as anyone can be, and you need not give up that intimacy which exist[s] between us on that account. I told you that last year I drank wine at the houses of the Professors. I wanted to know what good wine was. I am now satisfied, and you may rest assured that I do not mean to experiment in future. But of this, more at some future time. I could write all day on this, but you will think I am composing a temperance sermon.

You ask me if I attend the dissecting room. I am often there, but cannot dissect. I found that the subjects would be scarce and that I could improve my time better by reviewing the lectures, & this decided me not to purchase the ticket which would have added $16 to my expenses.

If Jane wants to address Frank Mc., tell her to direct to 210 Chestnut Street. He does not board with us, but I see him every day at College, as he attends our school. He is quite well and looks better than I have ever seen him, but he is the same Frank. Frank Royer, is also here, but he boards at the corner of Arch & Sixth and is quite well, though I fear sometimes that he drinks too much

brandy.[14] Perhaps not. As to Martha's question, it is impossible to answer. I might inquire till Doomsday and not find him until the catalogue is published which will not be for a month. I know a great many students from Virginia from the neighborhood of Port Royal & Richmond, but none of that name. We have one from there of the name of McChessney, if that will do any good.[15] There are four boarding in our house. I inquired of them, but they do not know a student of that name.

I can give you little that may be called news that will not be found in my former letter. The missionary Judson addressed an audience opposite our boarding house the night before last, but I knew nothing of it until it was over.[16] He is in very feeble health and will not appear again until he recruits, so that I fear I shall not be able to hear him. He is said to be an angelic-looking being. The church which he addressed subscribed $16,000 to the cause of foreign missions. I think if he recovers, he ought to visit Western Penn. & arouse their dormant benevolence. We have had a peace man from Boston preaching against war, which is congenial to the feeling of those who have the same antipathy to cold lead as myself. I thought, however, that his argument would not weigh very heavily with the people. But I must stop. When I commence writing to you, I do not know where to end, and I sometimes think I could write all the time, if the voluntary muscles would perform their function.
One who truly loves you,
David

Remember me to all at home and especially your mother, and write as often as you can if you should not have the time to do more than sign your name.
David

If there should be anything foolish in any of my letters, set it down for a crotchet and pass over in double-quick time. What is the use of leaving any white paper? These two lines are to be read last.
David

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14. B. Franklin Royer, who was from Huntington County, Pennsylvania, received his medical degree from Jefferson in 1847. Maxwell, *General Alumni Catalogue*, p. 85.

15. William S. McChesney, who was from Augusta County, Virginia, received his medical degree from Jefferson in 1847; Ibid., p. 80.

16. Adoniram Judson (1788–1850) was a renowned Baptist missionary. He was in such frail health during this time that it was often necessary for him to have another speaker present his addresses. *DAB*, vol. 10, pp. 234–235.

Letter Number Four

No. 41 George St., Philad., Jan'y 26th 1846 [Monday]

Dearest Maria,

Although I mailed a letter to you this morning, yet as I also received one from you, I feel bound to answer it, especially as there are some inquiries which seem to demand it, and also as Cantwell is absent at a ball, so that I have free scope. However, as I have written so lately, you will not expect much, and I shall therefore confine myself principally, if not altogether, to your letter. As to your letters, although they may be somewhat shorter than mine, of course I can not expect you to write as fully. Being confined to home as you are, you can give but little news. But this is nothing to me. All I want is to know about yourself. This is my greatest delight, & if I see but your name or my own written by your hand, it always gives me pleasure.

As to the prevalence of disease, you need give yourself no uneasiness, as I am more seasoned in some measure to the change of life induced on entering a city, & by the support of Him who always acts for the best, I hope my health may still be continued.

And how shall I endure two months? I never in my life was so anxious to be off. Time moves slowly and lazily along, though I fear that I do not improve those precious moments given me by a kind and generous God as I should. Yet I still hope that I am making a somewhat better use of them than in many of the previous years of my life.

As to your saying too much on the subject of temperance, never. You cannot say too much on that, nor could you on any subject to me, and I am glad to see you somewhat enthusiastic on that question. Our Profs. will certainly prevent some harm by their course, but much more if they would also set a good example by their own abstinence.

I have not yet presented my thesis, but you will see that in my last letter, I gave an account of my interview with the Dean and also the effects of it, which are not very encouraging, but more I could not do. If I had made the agreement before I entered, I could have done more, but I did not understand the game.

You mention your conversation with your parents and their feelings on the subject of separation. I believe that I have mentioned in a former letter somewhere what my prospects are in regard to going west. It is altogether improbable that I shall go. But had I the

best offer or prospect imaginable, it would be utterly impossible for me to do anything that would give you a moment's uneasiness if in my power to avoid it. Maria, you know I could not be happy if I thought you were not perfectly so, and what would be the mere matter of dollars and cents compared to our contentment? I do not fear but that I can make a living & that what the world, at least, in our part of it, would call a good one, if Providence but grants me health & strength, & this it is our duty to rely on.

As to settling in Blairsville, that would be unwise. At least, I fear not any respectable opposition to cope with them on equal terms, but, of course, I could not expect for to exceed them, and, in my opinion, there is not practice enough to support the physicians already there and especially if another was added. Derry would be a better place, but I certainly think there are better yet. I would rather risk New Alexandria if it was not so healthy. But it is useless to talk about this till I graduate, & when I see you at that time, I shall be better able to decide. Gross may offer me a partnership, or he may leave, or Rodrigue[17] may leave Ebensburg, which I believe I mentioned before. But enough of this.

As to your household engagements, they may be more interesting than you imagine, especially the cooking, baking, etc., which I was always delighted with. And nothing would give me as much pleasure now as to *see* you engaged thereat.

I must come to the conclusion you advise as regards the Dr. His whole soul must be engrossed with his Eveline, & yet he cannot love as I do, but I am not with you, & this accounts for my being able to write as much as I do.

I was sorry to hear that you are deprived of the pleasure of attending church. This certainly is a great privation. It is very common for the *wives* of physicians in the country, but I suppose the same cause does not affect the *betrothed*. I hope that this may never be the case with my wife, for whatever affects her must affect me also. Do not think this a selfish sentence.

I was happy to learn the state of Jane's mind with regard to Frank. He is certainly handsome & is now sprouting a tremendous pair of whiskers which somewhat obscure his *intelligent* counte-

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17. Michael Armand Theodore Aristides Rodrigue received his medical degree from the University of Pennsylvania in 1828. He practiced in Ebensburg, Pennsylvania. *Catalogue of the Alumni of the Medical Department of the University of Pennsylvania, 1765–1877*, p. 155.

nance, though mine take the *shine* off his as there are many of the same color in the school, & the sparks are continually flying.

You say that your letters lay at Youngstown some time. The cause of this is that I have received yours on Monday for some time past & therefore have not been able to answer them in time for the Tuesday's mail, so that I presume they are too late and have to lie over a week. I tried to obviate this last week & wrote on Saturday evening, but although I took it to the office, I was too late & therefore did not get it mailed until to-night. It will lie in Harrisburg some time & therefore, I fear, be still too late. I suppose that this one will not reach you until next Thursday or Friday week. Your two last have been received in four days from the time mailed, and I suppose would be in three if Sunday did not intervene on which day the penny post does not travel. I am sorry that you have to travel to the P.O. to accommodate me. I have convenience in that respect. It is not more than 3/4 of a mile & dry pavement generally.

As it regards Cantwell, he does not know that I have received more than one letter. I received one at the P.O. which was advertised. He asked me who it was from, & I told him from a lady, after which he asked no more questions. As he does not attend the Jefferson, he never knows when I receive one there. Though he suspects our intimacy, he had said something one day before the boarders about [illegible] Gross, & one remarked that he supposed she was my intended, but he said No, that I would come nearer Blairsville for my lady.

Frank Mc. & I were talking about Youngstown as a location for a physician, and he remarked that Derry would be better. I said that I thought I should prefer Derry. He replied, "We can understand the reason of that." *The subject was of course dropped.* He once inquired about you, & I gave him what little information I could. But forgive the length of this. Remember me to all and believe me as ever your own truly till death,
David

I have just tried to read this letter over & cannot make it out. Perhaps you can, so I leave it with you.

Letter Number Five

No. 41 Geo. St., Philad., Feb. 9th 1846 [Monday]

My own dearest Maria,

Your long-looked-for but welcome letter was received this morning, and I most freely excuse you on the grounds advanced,

for I could do nothing else even if you had no excuse, as you know it is said, "There never was anything made quarrelling with a woman." But I the more readily assure you on the ground[s] of its length, as it is decidedly the longest yet received. As it is only five days since I wrote you, there can be but little news of importance to communicate, and as that was strung out to a greater length than I expected, you will excuse the probable shortness of this.

As to my receiving a diploma, I hope that your predictions, if they may be called such, will be fulfilled. One fellow has already passed, & he does not look more intelligent than the rest of us. He is a married man and was favored with an early examination on that account, so that I begin to see that it is sometimes an advantage for even a student to be married.

I wish I had been with you on the morning you mention. I know I should have enjoyed myself much more than I did in listening to our old prosy lecturers of whom I am becoming most heartily tired, but I suppose there are reasons apart from the science of medicine which contribute to this result.

You say when your mother is absent, it is equal to the absence of half the family. The presence of her daughter to me would much more than equal the presence of the remaining members, and her absence would & does cause a blank the world cannot fill.

And now in reading your letter, I come to some parts "hard to be understood," and therefore I shall pass them over in silence as I am no commentator and therefore will not attempt to paraphrase.

As to the state of the roads, I have some recollection of them, though in this city we are almost led to forget mud. I took a walk into the suburbs the other day & saw the first thing of the kind for three months, but still it was nothing to the old Westmoreland mud. Don't mention those things on the chin till I come home.

Cantwell has just come in. He knew that I got a letter to-day, & he asked me who it was from. I told him from a lady, & he asked no more. Now when he sees me answer it, he says, By gosh, you must be in love, for if I got a letter of four pages from a lady, I should think I was.

I was much astonished to hear of the death of D. S. Truly, in the midst of life we are in death. We have many warnings of the uncertainty of life, but how little do we improve them. How soon do we forget the most solemn appeals, & how thoughtless we live, though on the very brink of the grave.

But having noticed all in your letter that I think demands except those which I cannot understand, I shall give you what little has occurred in my monotonous life within the last few days that is at all worthy of note. I have heard nothing from home or near it for some time. Hill has not written for six weeks. I do not know what has interrupted the correspondence, for he promised faithfully to be punctual. But all, even ministers, have some derelictions from duty, and I must excuse him as he is but a man of like passions with myself. John still continues faithful, and I generally receive a communication from him every week or 10 days. This morning I received a paper informing me of the nomination of Cousin Wm. Bell as candidate for governor. In case of his election, which I think at least possible, John's prospects will be somewhat brighter, as I think I mentioned in my last. And as his interest is, in a measure mine, it somewhat affects my prospects. I know he will never see me in difficulty if he can remove it even by sacrificing his own comfort, which last, of course, I should not wish.

Since writing to you, I have been to see the operation of the magnetic telegraph. It is truly wonderful to see what the mind of man has accomplished. You can hold a conversation with a person hundreds of miles distant with almost the same facility as conversing face to face. I wish we had a private one.

I was also tempted to visit the Museum by the appearance of that wonderful humbug, the skeleton of the Hydrarctios [*Hydrarchos*].[18] It is 114 ft. long, & I think that if ever the public were

18. The skeleton of the *Hydrarchos* was exhibited at the Philadelphia Museum (formerly Peale's Museum), which was located at 9th and George Streets. The *Hydrarchos,* or *Zeuglodon,* was owned by Albert C. Koch (1804–1867), a German geologist and collector. Koch first came to the United States and settled for a time in St. Louis, where he was proprietor of the St. Louis Museum. He gained notoriety for his "discoveries" of gigantic prehistoric animals, of which the *Hydrarchos* was one. The skeleton of this gigantic sea serpent, which measured 114 feet in length, was discovered by Koch in Alabama in April of 1845. The *Hydrarchos* was first exhibited in New York City in August of that year. The exhibition of the monster occurred midway through Koch's two-year tour of the United States. Koch later found the bones of a second *Hydrarchos* in Alabama, which measured 96 feet in length. Lewis's opinion of the *Hydrarchos* was shared by many in the American scientific community. For a criticism of Koch and his *Hydrarchos,* see *The American Journal of Science and Arts*, 1846, 2:129–131. For information on Koch and the *Hydrarchos,* see Albert C. Koch, *Journey Through a Part of the United States of North America in the Years 1844 to 1846,* Ernest A. Stadler, ed. and trans. (Carbondale and Edwardsville: Southern University Press, 1972), pp. xxviii–xxix, 131. See also, George Gaylord Simpson, "The Beginnings of Vertebrate Paleontology in North America," *Proceedings of the American Philosophical Society,* 1942, 86:168. The authors would like to thank Roy E. Goodman, Reference Librarian at the American Philosophical Society, for his assistance in locating these sources.

humbugged, they are now, at least those who believe it to be the real skeleton of an animal. From my inspection of it, I supposed it to be the bones of many large animals united to one so as to form a skeleton of this vast magnitude. The ribs, jaws, etc., are in pieces put together with some composition and could therefore be [illegible] to any size or figure. The other specimens in the Museum are many of them interesting, though as a whole, it is not to be compared to the one in N.Y.

I forgot to mention the receipt of a paper. The poetry is indeed beautiful and very appropriate. I can truly appreciate the feelings of the writer, and I hope my aim will be to meet in that land where farewell is a sound unknown. A tale unmarked is a full exemplification of my views and which I have often expressed. I have known full well the curse of such marriages where fully fortune gave a feeling of superiority which rendered a home once happy a *hell*, if I may be allowed to use so strong an expression.

I conclude this short note, hoping that you will write regularly if possible and remaining your own until death,
David

Remember me to all. As you have got to writing such long letters, to encourage you, I send a few copies of a city convenience not easily come at in the country.
David

Letter Number Six

Ebensburg, April 3rd 1846 [Friday]

As I promised to write to you as soon as I had made anything like a definite arrangement with Dr. Rodrigue, I now endeavor to fulfil that promise, giving you little more than the article of agreement, or principle [sic] features of it, as I have little more to communicate of at all an interesting nature.

In the first place, we have entered into a partnership for six months as equal partners at the end of which time he is to leave the practice in my hands. I am to pay him $300 for the stock & the practice. The stock is worth about $100. This I shall not bind myself to pay for at least a year.

Ebensburg is a most beautiful & romantic spot, situated in the midst of the mountains, not covered with "eternal snows," but

presenting a beautifully variegated appearance in the [illegible].[19] Here the remains of a [illegible] of 5 months' standing. Next, a tall, majestic hemlock, waving its gigantic plumes far above its humbler associates. Here, the remains of its former companion in glory, now lying prostrate by the omnipotent arm of a stern Northwester, & then the verdant vale, the lowing herd, the rippling brook — but stop. I am getting romantic myself, having ascended the Cambrian Parnassus & drunk from the fount of the Muse. I am afraid that I shall be tempted to forsake medicine & fly to poetry, & none e'er had a nobler theme than the object of my hourly, if not momentary, thoughts. But again, I say stop, & remember who I am writing to.

Do you think you can live in this enchanting spot? Let me know. I wish you could see it. But speaking earnestly, it is much improved and will be more so in the way of building this summer. There are many good families and persons who would make pleasant associates. They have an English sermon three times a month, and it is said that the minister is improving much in his English. He was quite respectable in his pronunciation when I heard him last, and he is a very gentlemanly man.

Ned Roberts will be married most probably in a few months. From all that I can learn his intended is a very worthy young lady. I have but one objection: she is not a member of the church. This would be insufferable with me, I think, though it is impossible to say what I should do under such circumstances. I have just now put the question to myself. Suppose M. was not a professor of religion?

I must conclude, as it is late, & I fear now that I shall not get this mailed to-night. Write soon to one who loves you truly & sincerely,

David

Acknowledgments

The David W. Lewis letters were purchased by the Historical Collec-

19. Ebensburg is in Cambria County, Pennsylvania, which is located in the western part of the state, right next to Indiana County.

tions in 1989 through a gift from Sheldon G. Cohen, M.D., in memory of George I. Blumstein, M.D.

College of Physicians of Philadelphia
19 South 22nd Street
Philadelphia, PA 19103

Philadelphia Health Care Photographs: A Partial Guide to Archival Holdings

JANET GOLDEN

Introduction

In the summer of 1989 I wrote a photographic history of Philadelphia health care with co-author Charles E. Rosenberg, entitled *Pictures of Health: A Photographic History of Philadelphia Health Care, 1860–1945.*[1] The most interesting part of my work involved visiting the numerous archives in the city. The archivists I met were all extremely knowledgeable, helpful, and justly proud of their holdings. In the hope of encouraging others to go and look at the collections I visited, I have written this guide.

A brief note regarding the limits of my research may be helpful. I was interested in photographs taken prior to 1945. I did not investigate portraits of famous physicians or nurses. More significantly, time constraints prevented me from conducting research in all of the relevant institutional archives; I am well aware that in addition to the thousands of pictures not selected for inclusion in our book, there were even more that I did not have the opportunity to view. Nevertheless, I believe the collections described below offer a good starting place for scholars interested in photographs of Philadelphia health care.

Afro-American Historical and Cultural Museum
7th and Arch Streets
Philadelphia, PA 19106
(215) 574-0380

The Afro-American Historical and Cultural Museum has two boxes of photographs of nurses, physicians, and patients from Mercy Hospital. Most of the photographs date from 1930. The photographs are housed in two collections: the Russell F. Minton Collection and the Delores Brewer Collection.

1. Janet L. Golden and Charles E. Rosenberg, *Pictures of Health: A Photographic History of Philadelphia Health Care, 1860–1945* (Philadelphia: University of Pennsylvania Press, 1991).

Transactions & Studies of the College of Physicians of Philadelphia Ser. 5, Vol. 12, No. 3 (1990); 387-396
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Atwater Kent Museum
15 South 7th Street
Philadelphia, PA 19106
(215) 686-3630

Images of health care in Philadelphia can be found in a number of the collections here. Among the best sources are over 260 photographs from the Red Cross from World War I, World War II, and the inter-war period and images of the surgical hospital at the Hog Island Shipyard which operated in Philadelphia during World War I.

Balch Institute Library and Philadelphia
Jewish Archives Center at the Balch Institute
18 South 7th Street
Philadelphia, PA 19196
(215) 925-8090

The archive has two file drawers of photographs arranged by both subject and ethnic group, containing a photocopy and description of each image relevant to the subject heading. Among the useful headings are: health, hospitals, and Albert Einstein Medical Center.

The Jewish Archives Center holdings include two boxes of photographs of health agencies, including the Philadelphia Jewish Hospital, Moss Rehabilitation, and the Jewish Maternity Hospital.

City Archives of Philadelphia
401 North Broad Street
Room 942
Philadelphia, PA 19108
(215) 686-1580

A published descriptive inventory with a subject index of the photograph collection makes it easy to use this archive. Most of the photographs are of the exteriors of buildings, among them hospitals, drug stores, and public bath houses. In addition, there are folders of images from the City Health Department and from the city's hospitals, including Byberry, Philadelphia General, and the Municipal Hospital.

Print and Picture Department
Free Library of Philadelphia
Logan Square
Philadelphia, PA 19103
(215) 686-5405

There are over ten thousand prints, pictures, and photographs in the Philadelphiana Collection of the print and picture department. Many of the latter include images from the city's hospitals. Other photographs of health care from Philadelphia (and elsewhere) can be found through a subject-level card file. The government documents department contains a variety of annual and special reports from city agencies, such as the Department of Public Health and Charities, which include relevant photographs.

Historical Collections of the Library
of the College of Physicians of Philadelphia
19 South 22nd Street
Philadelphia, PA 19103
(215) 563-3737

The Historical Collections contain a number of important photograph collections displaying health care delivery in Philadelphia. These are accessible through a card catalog.

One of the major collections (30 boxes) is from the Philadelphia General Hospital (PGH) showing life in the city's large public hospital, including an album of photographs taken by Robert J. Hunter, M.D., during his internship in 1904. (Some of the images in the PGH collection are duplicated in the Center for the History of Nursing Archives, described below.) Other major holdings include 276 glass lantern slides from the Howard Childs Carpenter collection illustrating various aspects of child health including the activities of the Department for the Prevention of Diseases of the Children's Hospital of Philadelphia, and the Samuel B. Sturgis collection, which contains images of many important medical sites and practitioners in Philadelphia.

Hahnemann University Archives and History of Medicine Collections
Lucy Finkel Cooke Room
Hahnemann University
245 North 15th Street, Mail Stop 912
Philadelphia, PA 19102
(215) 448-7811

There is no overall guide to the photographs housed in this collection, although an index to the images in *Hospital Tidings* (an in-house journal published between 1895 and 1952) does exist. The best sources of photographs are the medical school and nursing school yearbooks. The former contain a number of images of early clinics, inpatient and out-patient departments, and classroom activity.

Historical Society of Pennsylvania
1300 Locust Street
Philadelphia, PA 19107
(215) 732-6200

Among the holdings are an enormous collection of photographs from the newspaper morgue of the *Philadelphia Record,* dating generally between 1929 and 1946. These images range widely in subject matter and include hospitals, tuberculosis sanitoriums, medical treatment, equipment, and technology.

Other photograph collections such as the Penrose Collection and the D. Sargent Bell Collection contain additional visual material, with particular emphasis on hospitals in the Philadelphia area. Also of interest is an album from Marie Louise Bowmann, who trained at St. Timothy's Hospital in 1912–1915 and who subsequently worked at St. Luke's and at Abington Hospital. The Phoebe Westcott Humphreys Collection documents the work at the Seashore House for Invalid Children in Atlantic City, New Jersey, at the turn-of-the-century. There are also images depicting medical activities in Philadelphia during both World Wars. Additional photographs can be found by checking subject entries such as medical care, physicians and nurses, and medical education.

Library Company of Philadelphia
1314 Locust Street
Philadelphia, PA 19107
(215) 546-8229

The Library Company collection includes photographs of the exteriors of many of Philadelphia's hospitals as well as some rare images of the interiors of local Civil War hospitals including the Nicetown Hospital and the Chestnut Hill [Army] Hospital. The photographs are cataloged by subject.

Archives and Special Collections on Women in Medicine
Medical College of Pennsylvania
3300 Henry Avenue
Philadelphia, PA 19129
(215) 842-7124

This collection contains between 13,500 and 15,000 images related to women and health care. Among those related to Philadelphia are images of physicians and nurses associated with the Medical College of Pennsylvania (formerly Woman's Medical College of Pennsylvania) and the Woman's Hospital. The archive also maintains a collection from the American Women's Hospital Service (AWHS) which includes photographs of many Philadelphia women physicians who were involved in the AWHS effort to provide medical care around the world, beginning in World War I. Between ¼ and ⅓ of all photograph holdings have been cataloged chronologically by event and alphabetically by individual. Other images must be accessed through the curator of photographs.

Pennsylvania Hospital
8th and Spruce Streets
Philadelphia, PA 19107
(215) 829-3998

There are two sources for historical photographs of the hospital. The marketing department maintains a large file of 8 x 10 glossy photographs of the hospital which includes a number of interior shots from the late nineteenth century and the 1930s including outpatient departments, wards, and operatories. The archives also has a large collection of historical photographs of the hospital and

Figure 1. Preparing for surgery in the operating room, circa 1920.
Courtesy of the Pennsylvania Hospital.

nursing school, which are currently being inventoried and processed.

Charles L. Blockson Afro-American Collection
Temple University
Philadelphia, PA 19122
(215) 787-6632

The Blockson collection of Afro-American history includes over three hundred thousand negatives of photographs and thirty thousand photographs taken by John Mosley in his more than 30-year career photographing black life in Philadelphia, including many images of health care. Cataloging is not yet complete. Available thus far are folders showing doctors, dentists, nurses, hospital buildings, medical offices, laboratories, and related medical activities, including groups of nurses and hospital workers. Portraits of prominent Philadelphia area physicians and dentists are to be found among folders of portraits, and of Pyramid Club members.

Figure 2. Dr. F. W. Fortune, undated photograph.
Courtesy of the Mosley Collection, Charles L. Blockson Afro-American Collection.

Conwellana-Templana Collection/University Archives
Temple University Libraries
Philadelphia, PA 19122
(215) 787-8240

The archive has many folders of photographs of health care from its various schools, including the Temple University Hospital School of Nursing (1893–1971), the Temple University School of Medicine (founded 1901), and the Temple University Pharmacy School (founded 1905). Additional materials may be available from the individual schools. There are also images from Temple University Hospital, which was founded in 1892 as Samaritan Hospital.

Figure 3. School doctor? Philadelphia Board of Education, 1928.
Courtesy of the photojournalism collection of the Urban Archives, Temple University.

Urban Archives
Paley Library
Temple University
Philadelphia, PA 19122
(215) 787-8257

The photography morgue from the *Evening Bulletin* contains over six million photographs from the *Philadelphia Inquirer, Evening Bulletin,* and *Daily News* which can be accessed through a list of subject headings. However, because the photo files were weeded periodically, most of the images are from the postwar years. Among the best sources are the eight boxes of photographs of hospitals and numerous boxes labeled "health care."

There are two major collections focused on sanitary conditions and poor housing in Philadelphia. One is the Octavia Hill Association Collection which includes over 250 images circa 1899–1930; the other is the Housing Association of the Delaware Valley Collection which includes approximately six hundred glass lantern slides circa 1905–1928, and about six hundred photographs from the

period 1910–1960. Additional health care images can be found in the collections from various social welfare agencies. There are guides to these collections but the photographs have not been cataloged.

University Archives/Special Collections Department
Thomas Jefferson University
Scott Memorial Library
1020 Walnut Street
Philadelphia, PA 19107-5587
(215) 955-7769

The photographs in this archive are not cataloged. Organization is by categories of persons, places, objects, events, etc. The scope of the collection is limited to matters pertaining to the university, its personnel, and alumni, dating from the late nineteenth century to the present. Numerous images no longer extant as original photographs can be reproduced from publications such as annual reports and year books.

The largest segment of the collection consists of individual and group portraits. Another significant portion depicts campus buildings and interiors, including the many clinical settings Jefferson has occupied in its 166-year history. Among these are photographs of the laboratories, out-patient clinics, and inpatient wards, particularly the pediatric unit. The majority of these are classified as "places"; when identified, they are filed by building name.

Center for the Study of the History of Nursing
University of Pennsylvania School of Nursing
307 Nursing Education Building
Philadelphia, PA 19104-6096
(215) 898-4502

There are approximately three thousand photographs in the Center's collections and item-level descriptions are available for two of the major collections. Some eight hundred photographs from the Mercy-Douglass Hospital School of Nursing Alumnae Association illustrate life in Philadelphia's two black hospitals: the Frederick Douglass Memorial Hospital and Training School (founded in 1895) and the Mercy Hospital and School for Nurses (founded in 1907). These two independent institutions merged in 1948.

An even larger collection of over 1,200 photographs comes from the Alumni Association of the Training School for Nurses of Philadelphia General Hospital. While many of the images are simply individual and group portraits of nurses and doctors, others show the full scope of hospital life.

Other significant collections include the Visiting Nurse Society of Philadelphia and the Starr Centre Association of Philadelphia showing, among other things, public health and social welfare work by nurses. There are also a number of other collections containing photographs such as the Chestnut Hill Hospital School of Nursing (1910–1987) and the Presbyterian School of Nursing (ca. 1910).

The University Archives and Record Center
University of Pennsylvania
North Arcade, Franklin Field
Philadelphia, PA 19104
(215) 898-7024

A well-organized inventory of photograph holdings makes it easy to use this archive. Holdings include exterior shots of the University of Pennsylvania School of Medicine and the Hospital of the University of Pennsylvania, graduating classes of the University of Pennsylvania School of Medicine and the University of Pennsylvania School of Nursing, and portraits of the Medical School faculty and of the membership of various medical societies. Photographs of individual graduates can also be obtained.

Among the most interesting images are those showing the various medical school laboratories (1 box of images) and those from the hospital (1 box) which include photographs of various wards and clinics.

Temple University
Department of History
Gladfelter Hall
Philadelphia, PA 19122

Reviews

JAMES HARVEY YOUNG. *Pure Food: Securing the Federal Food and Drugs Act of 1906*. 312 pp. Princeton: Princeton University Press, 1989. $29.95

Reviewed by PHILIP J. PAULY

The Pure Food and Drugs Act of 1906 was made possible by the perfection of wet analytical chemistry. Detection of adulterants depended on the existence of a secure battery of techniques for pinpointing small quantities of a variety of chemicals. The repeatable climax of analysis would occur when, after a long sequence of reagents and manipulations, a small amount of pure crystalline material would "fall out" of what had originally been a complex, murky mixture.

Pure Food, James Harvey Young's narrative of the origins of the 1906 law, has many of the same analytical qualities as the work of the chemists who enter into his account. In contrast to political historians, who have based large claims about the power of the business class, the rise of consumerism, and the moral and psychological characteristics of progressive reformers, on artificially isolated parts of the pure food story, Young outlines a long sequence of actions and political manipulations leading toward a final legislative goal. Seven factors — change, complexity, competition, crusading, coalescence, compromise, and catastrophe — structure his pluralistic effort to connect the varied controversies involving meat, milk, processed foods, and ethical and proprietary drugs. Through this analysis, Young creates a map of the complex operations that ultimately resulted in the legal precipitate of 1906.

Young traces the pure food story back to the middle of the nineteenth century. The federal government first intervened in 1848, with little debate, to monitor the potency of such common imported drugs as rhubarb and morphine. A decade later, *Frank Leslie's Illustrated Newspaper* published the first journalistic exposé of food production, attacking the marketing of milk from New York City cows fed distillery mash. Technological change — new products, preservation methods, and techniques for detecting adulterants —

Transactions & Studies of the College of Physicians of Philadelphia Ser. 5, Vol. 12, No. 3 (1990); 397-399
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combined with the growing complexity of national scale mass marketing to generate interest in federal regulation.

From the start, an uneasy relationship existed between business leaders and health crusaders. Grocers such as Francis Thurber sought to eliminate fraudulent mislabeling while maintaining consumer confidence in the goodness of processed foods. George T. Angell and other earnest reformers spoke loudly about contamination and speculated that large amounts of undetected poison were being purveyed. Yet these interests could come together, as first became evident on the congressional level in 1882, when butter producers joined health advocates to denounce the "greasy counterfeit" oleomargarine, a debased product of chemical manipulation.

The margarine controversy also demonstrated, however, how little intellectual consensus there was about food safety and how easily well-organized business interests could block legislation. Harvey Wiley, head of the Agriculture Department's Division of Chemistry, was the individual who, beginning in the late 1880s, built an effective pure food coalition. Wiley worked out the compromises necessary to maintain a shifting alliance of manufacturers, retailers, state chemists, women's clubs, physicians, and writers behind his campaign to protect health, insure honesty, and create a pure food bureaucracy. Surveying volumes of congressional hearings, Young describes the intricate maneuvers of various interests (most notably pharmacists and distillers) to maintain their competitive positions, until the dramatic muckraking publications of 1905–1906 (most notably Upton Sinclair's *The Jungle*) put food regulation at the forefront of national politics. In this supersaturated situation, all groups rallied to get the "best" bill possible during the rapid and unpredictable process of legislation.

Harvey Wiley oscillated without much anxiety between the role of bureaucratic scientist concerned about promoting trade and minimizing mortality, and that of a preacher calling for commercial honesty and natural food. *Pure Food* has something of the same ambiguity. In his discussions of margarine and sodium benzoate, as well as his analyses of debates over "pure" opiates and whiskey, Young recognizes that assessing which side was scientifically or morally superior is probably impossible, and, in any case, less important than understanding the interests and arguments involved. Yet at the same time he appropriates the crusaders' moralistic condemnations of other entrepreneurs, such as the producers of New York's "swill milk" and the manufacturers of the morphine-laced

Mrs. Winslow's Soothing Syrup for Children Teething. He harmonizes these shifts in stance through intuitive sympathy for individuals such as Wiley, who strove to combine cautious rationality with moral alertness and political effectiveness.

It seems to me, however, that the relations between truth and goodness regarding pure food and drugs need to be articulated more explicitly. It is not obvious that milk from mash-fed local cows was less healthy than a product transported in the summer from the countryside, or that Mrs. Winslow's syrup was more dangerous than comparable prescription products. At any particular point in time, what put certain products and not others beyond the pale?

An answer might be found by shifting from the political arena to technical communities, and by focusing less on controversies than on the routines of training and testing. Government chemists and public health officials came from the same schools as commercial scientists involved with food and drug production, and they shared at least some techniques, anxieties, and professional societies. In the last two decades of the nineteenth century all these people were building a technical/ethical framework within which work could be judged, problems defined, and burdens of proof assigned. It seems probable that their network formed a crucial, not fully explored, bond among science, morality, and power that precipitated the Food and Drugs Act. By 1906, doing good inevitably required doing research.

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KUHSE, HELGA. *The Sanctity-of-Life Doctrine in Medicine: A Critique*. 235 pp. Oxford: Clarendon Press, 1987. Price $45.00

Reviewed by GARY B. FERNGREN

Perhaps no assumption has been more basic to the practice of medicine in the Western tradition during the past 1,500 years than the sanctity-of-life principle (SLP), which asserts that all human beings enjoy, as the most fundamental of all human rights, the right to live. Only in the last generation has this belief been seriously challenged, in large part because unprecedented advances in medical science and technology have raised troubling questions regarding its validity. In *The Sanctity-of-Life Doctrine in Medicine* Helga Kuhse, deputy director of the Centre for Human Bioethics at Monash University, Australia, claims to have written "the first comprehensive critique of the sanctity-of-life doctrine in medicine."

The two fundamental tenets of the SLP are the inviolability and the equality of all human life. The SLP prohibits not only actively killing, but intentionally failing to give treatment as well. Since all lives have irreducible value, no particular life (e.g., that of a fetus or a defective newborn) is regarded as less valuable than another. A number of proponents of the SLP hold, however, that it is permissible in certain instances to let a patient die without treatment. Kuhse refers to this position as the "qualified sanctity-of-life principle" (qSLP) and she maintains that it is the most commonly-accepted sanctity-of-life position today amongst bioethicists. Her thesis is that the qSLP is flawed in both prohibiting and condoning the intentional termination of life and doing so on the basis of quality-of-life considerations that are inconsistent with its premises.

Most of Kuhse's discussion centers on the distinction between letting a patient die (which is sometimes justified by proponents of the qSLP) and bringing about his death by direct action, a distinction that, she argues, cannot be maintained. She begins, in Chapter 2, by discussing causal responsibility in terms of the distinction between acts and omissions. She denies that omissions lack causal efficacy and that failure to act simply allows nature to take its course. From causal responsibility Kuhse moves to a discussion of moral responsibility. Claiming to have demonstrated that causal efficacy does not vary between cases of killing and letting die, she denies that one can distinguish "in a morally relevant sense" (a favorite phrase of Kuhse's) between the two. Kuhse identifies as the

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"residual basis" of the distinction, whether one makes it happen or lets it happen (pp. 73 and 79). She suggests that analyses that lead to the conclusion that one is more responsible for what one makes happen than for what one lets happen, represent a view that "rests ultimately on nothing more substantial that [sic] the doubtful metaphysical assumption . . . that Nature (or God?) is the dominant agent, and that in refraining from preventing death an agent merely lets happen what Nature brings about . . . To subscribe to such a view of agency is, however, an abdication of moral responsibility . . ." (p. 80).

In Chapter 3 Kuhse deals with intention, and specifically with the distinction between results that are intended and consequences that are foreseen but not intended, i.e., with the principle of double effect (PDE), which has long been employed by Catholic moral theologians. She quotes R. A. Duff's statement that "the absolutist . . . is primarily concerned with the intentional actions of human agents, rather than their consequences" (p. 87). Kuhse argues that there is no plausible notion of intention that will permit us to distinguish between killing and letting die. She proposes instead to distinguish between the moral permissibility of an action and the agent's responsibility: we are responsible for all the consequences of our actions, but blameworthy only according to the criterion of proportionality. She wishes to avoid theological explanations that she believes obscure the distinction between intention and responsibility for the consequences of one's actions by judging an action according to both objective standards and a subjective evaluation of intention. Hence, there is no place in her system for tragic moral choice, and she does not hesitate to attribute the same kind of responsibility to a physician who, in choosing not to perform a craniotomy (surgical puncturing and collapse of fetal skull to facilitate removal of dead fetus), allows the mother to die, as she would to Nazi officials who bear responsibility for their actions, however heinous, committed under orders (pp. 153–154). Since only the consequence of an action is taken into account in assessing moral responsibility, it is irrelevant whether the action was motivated by good or bad motives.

The distinction between ordinary and extraordinary (or 'proportionate' and 'disproportionate') means is the chief traditional criterion for determining which cases of letting die are intentional. As Kuhse observes, this distinction has a long history. Refusal to use extraordinary means has not generally been regarded as the

intentional termination of life. Kuhse rejects the distinction because a major factor in determining whether a means is optional is the state of the sick person: the same treatment that would be regarded as optional in a terminal patient would not be in a person who was merely sick. In short, it depends on the circumstances. Hence, she argues, it has little to do with means and much to do with quality of life (pp. 142–146).

In Chapter 5 Kuhse reiterates her thesis that the qSLP is not only conceptually flawed, but that it has "unacceptable consequences in practice as well," namely, that "it leads to muddled practice and to ethically indefensible consequences" (pp. 199–200). A preference for passive rather than active euthanasia is undesirable inasmuch as "it may involve patients in much unnecessary suffering, and may lead to decision-making on morally irrelevant grounds" (p. 201). There is in her calculus of pain and happiness no means of assessing the beneficial effects of suffering. She does not even discuss the long tradition (found in both pagan and Judaeo-Christian thought) that there is, in certain circumstances, moral, religious, and psychological value in suffering. A lingering death, she thinks, is worse than a sudden one. She assumes that "*whenever* the decision is made to let a patient die, death would be in the patient's best interest" (p. 206; Kuhse's italics). But even if death is not in the patient's best interest, positive euthanasia is still "the morally preferable option (because "more economical of suffering," and so on)." The distinction between active and passive euthanasia, she argues, is tragic and morally irrelevant ("a moral quibble").

Kuhse makes explicit in her last chapter many of the assumptions that have been operative throughout the book. Her strong personal antipathy to the SLP, which has been kept in check until this point in the book, is also much more apparent, and her discussion far from dispassionate. Perhaps the most interesting part of Chapter 5 is her discussion of the nature of man. She seeks a definition of life that will permit her to say that a permanently-comatose patient is not human. Her discussion of "What's Special About Human Life?" is characterized by a noticeably depreciatory tone regarding human life in general and certain kinds of human life in particular. She rejects the view that human life is sacred because it is human, accepting instead the view that it has special value because man possesses certain attributes such as self-awareness, rationality, and moral consciousness. "I start with the assump-

tion that conscious life has value because it enables the existence of pleasurable states of consciousness" (p. 213).

In defining the types of life which possess special value, she distinguishes not merely between qualities, but between different kinds of life. With Michael Tooley she believes that "the ability to see oneself as existing over time . . . is a necessary condition for the possession of a right to life . . ." (p. 215). Hence, "neither human foetuses nor human infants, nor humans with severe mental retardation or brain damage, are persons; and it would not be directly wrong (that is, a wrong done to them) to take their lives. On the other hand, chimpanzees might be persons, and so might be some other non-human animals as well" (p. 216).

In the volume under review, Kuhse submits the SLP to penetrating criticism. She exposes undoubted problems in the concept and its application. Is she successful in demonstrating that these problems are sufficiently great to require its abandonment? I believe not. She thinks that artificial life-support systems have changed the nature of the question and made the SLP inconsistent by forcing it to rely on quality-of-life considerations. There is no doubt that the use of new technology has altered some aspects of the situation and necessitated the formulation of a qualified position. But the qualification does not render the principle internally inconsistent; it merely means that its application must be modified. Advances in medical science and technology have introduced problems that are troublesome: not merely to those who hold a sanctity-of-life position, but to medical ethicists and professionals generally. Kuhse is critical of what she regards as trivial or meaningless distinctions (e.g., between killing and letting die). In fact distinctions have to be made because there are cases that are problematic and their solutions elusive. Some cases indeed are *sui generis,* posing conceptual and ethical dilemmas on any point of view. Abandoning the sanctity-of-life position for a consequentialist one will not end controversy, but it may tend to make what ought to be difficult decisions too easy and perhaps even trivial.

The sanctity-of-life principle, while admitting of subjective considerations in its application, provides an objective, if sometimes inconvenient, standard for the protection of the weak, the helpless, and those "on the fringes" of life. The quality-of-life principle advocated by Kuhse, by rejecting the presumption that, whenever possible, human life deserves to be sustained, may lead to a greater tendency in doubtful cases to dispose of life whose continued

healthy existence is merely problematic. In turn, those who make life-and-death decisions without an objective standard will likely find themselves open to an almost infinite variety of arguments against sustaining fragile life that, while suitably rationalized, will frequently be motivated by expediency or fear of inconvenience.

The author's economical style does not make for easy reading and her prose is marked by a number of stylistic infelicities and ugly neologisms. "It is obvious that" is used all too often in cases that are by no means obvious to the reader. Finally, Kuhse has the annoying habit of raising questions only to postpone their discussion. "Later on in this chapter, I shall argue that . . ." (p. 35 and *passim*) is almost formulaic.

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New Books in the History of Medicine in the Historical Collections of the Library, April through June 1990

JACK ECKERT

W. Blair Bell, *The Principles of Gynecology* (Birmingham, Alabama: Classics of Obstetrics & Gynecology Library, 1990).

Felip Cid, *Diccionari Historic d'Instruments I Techniques Mediques: I. Cirurgia* (Barcelona, Spain: Institut d'Estudis Universitaris Josep Trueta, 1990).

Anne Crowther and Brenda White, *On Soul and Conscience: the Medical Expert and Crime* (Aberdeen, Scotland: Aberdeen University Press, 1988).

Jeremiah S. Finch, *A Catalogue of the Libraries of Sir Thomas Browne and Dr. Edward Browne, His Son: a Facsimile Reproduction* (Leiden, The Netherlands: Leiden University Press, 1986).

Guide to Records in the National Archives — Mid Atlantic Region (Washington, D.C.: National Archives and Records Administration, 1989).

Ronald W. Raven, *The Theory and Practice of Oncology: Historical Evolution and Present Principles* (Park Ridge, NJ: Parthenon Publishing Group, 1990).

William H. Robertson, *An Illustrated History of Contraception: a Concise Account of the Quest for Fertility Control* (Park Ridge, NJ: Parthenon Publishing Group, 1990).

Henry R. Rollin, *Festina Lente: a Psychiatric Odyssey* (London: British Medical Journal, 1990).

Harold M. Schmeck, Jr., *Karger, Turning Medical Progress into Print: a Mirror of a Century of Medical and Scientific Publishing* (Basel, Switzerland: S. Karger, 1990).

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Elizabeth Tunis, compiler, *Early Western Manuscripts in the National Library of Medicine: a Short-Title List* (Bethesda, MD: History of Medicine Division, National Library of Medicine, 1989).

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Memoir of Stewart McCracken, 1922–1989

HOWARD H. STEEL

Stewart McCracken died on 21 April 1989 as a result of a fall at the Union League. He had been attending a meeting of the Medical Club of Philadelphia, where he was being honored as a former president. He is sorely missed by his devoted family, his countless patients, and his innumerable friends in all walks of life, who remember him as a kind, gentle, and caring physician, and a remarkable, contagiously happy person.

My life-long friendship with Stewart began when we were students in the Ventnor City School System, in Ventnor, New Jersey. Our acquaintance continued sporadically through public school and the University of Pennsylvania. Stewart surfaced again on the first day of classes at the Temple University School of Medicine. We found ourselves seated together, and from that time continued an intimate association which lasted until the tragic accident of April 1989.

There was a reason for the lapses in continuity of our early acquaintance. Stewart was born on 9 May 1922, in Shanghai, China, where his father, Josiah C. McCracken, was a missionary physician for 35 years and medical dean of St. John's Medical School. His mother, Helen, was also a missionary. Josiah McCracken returned on sabbatical to a missionary home in Ventnor City, New Jersey, every four years with his family of two boys and six girls. Stewart was the youngest of this group. Two older siblings, a brother and a sister, also became physicians.

Stewart excelled at the University of Pennsylvania. He was elected to all of the honorary societies, was captain of the Ivy League championship tennis team, and played on both the soccer and squash teams. This love for sports carried over into adult life. Stewart was the top-ranked tennis and squash player at the Philadelphia Cricket Club for many years, and he and his wife, Joan Fernley

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McCracken, combined as mixed doubles partners there, accumulating many trophies for championship play in both tennis and squash. He also continued to play club soccer, competing against younger men and gaining their wholehearted respect.

After graduating from the University of Pennsylvania in 1942, Stewart attended the Temple University School of Medicine, receiving his medical degree in 1945. After a two-year stint in the navy, during which he was stationed in China, Stewart returned to Philadelphia to begin his medical career. He brought a "missionary" zeal, learned from his parents, to bear in his practice, first in North Philadelphia and later in Chestnut Hill. Stewart was truly a family physician, specializing in internal medicine and rheumatology for more than 40 years. House calls and night calls were as much a part of his life as his office practice, and he was beloved for it. He was an exceptional doctor, who learned early to listen to his patients and to take the time to talk with them.

Stewart McCracken was also a kind and devoted teacher during his tenure at the Temple University School of Medicine. His students particularly appreciated the human approach he brought to medicine: he taught them to treat their patients not as numbers or diseases, but rather as individuals. This attribute was particularly appreciated by those in the chemotherapy department of the Veterans Administration Medical Center, where he treated patients with lung cancer. McCracken also attended patients from Chestnut Hill Hospital.

Stewart McCracken's abilities as an organizer and as a thinker and mover were appreciated by the Eastern Pennsylvania Chapter of the Arthritis Foundation, and by the Philadelphia Rheumatism Society. He was a long-time member of their executive councils, and a past president of both organizations. He was also a member of the Philadelphia County Medical Society and of the American Medical Association.

Stewart is no longer with us. We are all better, however, for having known this consummate, caring physician whose blithe spirit brought joy to all it touched. In addition to his wife, Stewart is survived by two sons, Stewart Jr. and James Christopher; two daughters, Ellen Clute and Mary Newpher; and two grandchildren.

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When sending manuscripts as hard copy, authors should submit two copies, typed on one side of 8½ by 11 inch paper; all material, including quotations and footnotes, should be double-spaced. A brief biography of the author should also be included. *Transactions & Studies* prefers to receive articles on 5¼ inch computer disk, preferably in "Word Perfect," although other disk sizes and languages are acceptable. Articles on disk should have the notes, in footnote form, listed at the end of the paper. A complete set of instructions will be sent, upon request, to authors.

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Transactions & Studies of the College of Physicians of Philadelphia (ISSN 0010-1087) is published four times a year (March, June, September, December) by the College of Physicians of Philadelphia, 19 South 22nd Street, Philadelphia, PA 19103. Second-class postage paid at Philadelphia, PA 19104. POSTMASTER: Send address changes to *Transactions & Studies of the College of Physicians of Philadelphia,* 19 South 22nd Street, Philadelphia, PA 19103.

Subscription correspondence should be sent to the journal at the same address. Subscriptions, U.S.A. and Canada $35.00, foreign $40.00. Single copies, $10.00.

Transactions & Studies of the College of Physicians of Philadelphia is indexed in *Biological Abstracts, Chemical Abstracts,* and *Index Medicus.*

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Series V Volume XII No. 4 DECEMBER 1990

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MEDICINE & HISTORY

Series V Volume XII Number 4 December 1990

Acknowledgments

The publication of this issue of *Transactions & Studies of the College of Physicians of Philadelphia* is made possible through the generosity of:

The M. Louise Carpenter Gloeckner Memorial Fund

The Morris Feld Memorial Fund

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Editorial

The long and distinguished history of the *Transactions & Studies of the College of Physicians of Philadelphia* makes its editorship both an honor and a challenge. As I begin my tenure as editor, it is my hope that I can continue the valuable initiatives of my predecessors in editing Series V, Medicine and History, and work to ensure the role established for *Transactions & Studies* as a journal aiming to put modern medicine in a broad historical context. The special character of the College and the significant contributions of Philadelphia medicine and health care to the larger scene are of importance in shaping the journal. For me, it is a pleasure and an education that in this issue the *Transactions & Studies* is publishing an oral history of the fascinating career of Dr. Francis C. Wood, the eminent Philadelphia cardiologist and medical leader, whose name graces the Institute for the History of Medicine established at the College.

Other contributions deserving readers' attention in the December number include Palmer Futcher's skilful delineation from private correspondence of Sir William Osler's relationship with Marjorie Futcher, neé Howard, an example of Osler's extended family life that has not been fully appreciated by historians, and William Helfand's lively and informative illustrated account of the use of medical imagery in political prints. In their different ways, these essays increase our understanding of the distinctive place of medicine in history and culture. A recollection of the colorful neurosurgeon Charles Harrison Frazier by Pendleton Tompkins completes the issue and demonstrates how the influence of the physician mentor shapes medical style.

In taking up the editorship, I would like to pay a particular tribute to my immediate predecessor, Nancy Tomes. Her editorial expertise, innovative ideas, and organizational abilities have been amply demonstrated in the 1989 and 1990 issues under her charge.

CAROLINE HANNAWAY

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The Letters of William Osler to Marjorie Howard: Shared Courtship, Family, and Bereavement

PALMER H. FUTCHER

Introduction

William Osler was a renowned clinician, medical educator, and bibliophile of one hundred years ago. The complexities of his character have been related in Harvey Cushing's *The Life of Sir William Osler.*[1] There we learned of his humor, addiction to pranks, early ability in sports, compassion with patients, and cherishing of many friends. But the valuable *Life* may reflect the persistence of Victorian constraints in its account of Osler's intimate relationships. Further, it was written when Osler's wife Grace was still alive.

It was probably a similar constraint on the part of the recipient of the 90-odd letters excerpted below which made her decide to keep them private. This correspondence, most of which has never been reported, reflects the socialization of the well-to-do in the early years of the twentieth century. The letters originated in the family setting, the place in which acceptable relationships were conducted in the Victorian period. Many of them manifest Osler's humor. Beyond that, these letters are of special interest to students of Osler's character, throwing light on his personal manner in intimate relationships, in this case, with a young woman.

Although Cushing's *Life* gives us many excerpts of letters to children, it presented only three to a young woman who was neither a relative nor a single woman. All three letters were addressed to the medical student "Trotula" (Miss Flumfelt of Manchester), and were dated 1909 to 1912.[2] They are reminiscent of those to be quoted below, composed with tongue in cheek and expressing interest in an impending marriage. Any of Osler's letters to other young women were either not preserved, or like those which follow, not available to Cushing. Commenting on the style of the letters excerpted below, Dr. Faith Wallis, history of medicine librarian at the

1. Harvey Cushing, *The Life of Sir William Osler,* 2 vols. (Oxford: Clarendon Press, 1925).

2. Cushing, *Sir William Osler,* vol. II, pp. 203, 318, 329.

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Osler Library, McGill University, Montreal, and expert in Osleriana collected since Cushing's *Life*, reported ". . . Osler seems to have reserved the flowery, playful, mock-romantic salutations for children. [Marjorie's] case is the only one I know of where a young woman in her twenties was addressed in this way."[3]

In any consideration of Osler's relationship with the opposite sex, his intellect and handsome athletic figure should be taken into consideration. Osler must have been attractive to many women. As a medical student, he formed important friendships with female cousins.[4] Otherwise, I am unaware of documentation that he became deeply involved, either fleetingly or seriously, with the opposite sex until he met Grace Revere Gross (Mrs. Samuel W. Gross), when he moved to Philadelphia in 1884 at the age of thirty-five. Grace became a widow in 1889, the same year in which Osler moved to the Johns Hopkins Hospital in Baltimore. They met deliberately at various places thereafter, but it was not until 1892, when Osler's *Principles and Practice of Medicine* was published, that they married. Osler was almost forty-three. Their son Revere was born in 1895.

Until his marriage, Osler was presumably held back from entering wedlock by the straitened finances he inherited as one of the nine children of a minister and his devotion to academic medicine. Further, the mores of his day warned sternly against sexual encounters or even romance outside of marriage. It is likely that the young Osler followed his later advice of never being "too much with the Lady Nicotine, or fooling with Bacchus, or worst of all, with the younger Aphrodite — all 'messengers of strong prevailment in unhardened youth' . . . . This much you all know as men; once the bit is between his teeth the black steed Passion will take the white horse Reason with you and the chariot rattling over the rocks to perdition."[5]

Grace proved a most supportive wife to William. An attractive, poised woman with many friends of her own, she devoted herself to caring for William and meeting the demands which William's personal proclivities and professional responsibilities imposed upon the Osler household. She outlived William by eight years.

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3. Faith Wallis, personal communication to author, 15 August 1989.
4. George T. Harrell, "The Osler Family," *JAMA*, 1982, *248*:203–209.
5. William Osler, *A Way of Life: An Address to Yale Students, Sunday Evening, April 20, 1913* (Baltimore: Norman Remington, 1928).

Osler's Dreams

Though Osler, as far as we know, was celibate until his marriage, and was a faithful and contented husband thereafter, like many of us, he was not celibate in his dreams. Intermittently, from 1885 through 1919, more assiduously from 1910 through 1911, he recorded his dreams in a notebook which is in the Osler Library at McGill University. Charles G. Roland made this record available in 1980, introducing the transcript with these comments:

> A man's dreams are, of course, invaluable to the student of his personality. Dreams are the "night side" of our lives in more ways than one. As Freud has taught, in sleep the mind's "censorship" relaxes and energetically repressed wishes — sexual and aggressive — come to the fore. Osler's dreams show us a different man from the one portrayed by Cushing. The great physician's dreams do not point him out as any worse than the rest of us or force us to revise in any way our high estimate of the man, but they do reveal that even the waking saint has his feet in the same clay as his brethren.[6]

It is of importance to this commentary that the Freudian interpretation of dreams has recently been seriously questioned by neurophysiologists at Harvard, J. A. Hobson and R. W. McCarley, now quoted in the lay press.[7] Their controversial concept states that dreams have no hidden meaning and do not arise from an unconscious wish; rather they are initiated by meaningless signals from the brain stem which reach the cerebral cortex.

Whatever their significance, of the many fascinating dreams intruding on the sleep of this family-oriented physician of the Victorian-Edwardian Era, two in particular are relevant to this essay. Thus, Roland gave us Osler's "dream 30," presumably experienced in 1911, as follows:

> 16 Nov . . . . I have had extraordinary dreams the past month, but singularly unsuccessful in remembering. Some of shocking improbability yet I was not the least surprised. M.'s husband was her father P. H. who was just going off on a trip. He had the same relation to me as of old. We saw him in the cab and

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6. Charles G. Roland, "Sir William Osler's Dreams and Nightmares," *Bulletin of the History of Medicine*, 1980, *54*:418–446.

7. Susan Boxer, "Inside Our Sleeping Minds," *Modern Maturity*, October–November 1989.

> went back to the house, when M. began to make love to me in a most improper manner.[8]

One year previously, in 1910, Osler had recorded another dream, "dream 10" in Roland's transcripts, thus:

> Dec. 5. Four or five dreams — woke after three of them. Tried to dream of M. and the baby. Passed thro a room — may have been a lying-in room but it looked like the shambles, blood everywhere and cow-dung! and yet it had a marble floor etc. I went out thro a garden of a big place like a hospital and was shown the gate of a big field and told to peep in only — scores of cows with their calves — Marjorie was one of them![9]

About Marjorie

This "Marjorie," a.k.a. "M.," was producing her first two children at the period of these dreams. Who was this person who played a part in Osler's nights and to whom he devoted some of his correspondence?

Gwendolen Marjorie Howard was born in Montreal in 1882 to Robert Palmer Howard and his second wife Emily Severs.[10] Howard was an older friend of Osler's and was revered by him as his professor of medicine at McGill. Marjorie's parents had both died by the time she was ten; thereafter, she lived a peripatetic, often gay and cosmopolitan life until her marriage in 1909 to Thomas Barnes Futcher, a physician residing in Baltimore. Himself a Canadian, Thomas was a graduate of the University of Toronto and was the third of Osler's chief residents at the Johns Hopkins Hospital in the 1890s.

Marjorie's early years had taken her to primary school in Dresden with her older sister Muriel, to boarding school in England, to Berlin while her older brother Campbell studied medicine, and to residence again with Muriel in Montreal. In 1907, she became her brother Campbell's housekeeper while he was establishing his medical practice in Montreal. In the course of these perambulations, Marjorie, a handsome young woman, enjoyed an active social life in the English-Canadian culture of Montreal in the winter and the Lower St. Lawrence River resorts in the summer. Excitement peaked

8. Roland, "Sir William Osler's Dreams."

9. Ibid.

10. Marjorie was the mother of the editor of the letters in this essay, and presumably he was one of the calves in the "big field."

Figure 1. Marjorie Howard, England, June 1909.
Courtesy of Palmer H. Futcher, M.D.

when officers from visiting ships of the Royal Navy came ashore. Marjorie's contacts were broadened by her half-brother Jared's marriage in 1888 to Margaret, daughter of Donald Smith, a Scottish-Canadian millionaire who became Lord Strathcona.

Marjorie's travels saw her frequently at the Oslers' house, in Baltimore until 1905, and in Oxford thereafter. Osler felt considerable responsibility to the orphaned children of his respected teacher of medicine at McGill. His great attachment to Campbell Howard, related along with information on the Howard and Futcher families in R. Palmer Howard's *The Chief: Doctor William Osler,* emanated further from Campbell's own personality and competence as a physician.[11] William and Grace Osler's liaison with Marjorie sprang from their realization that the young woman, William's junior by 33 years, had been bereft of parental association and was living where she could in Montreal. Marjorie's beauty and personality

11. R. Palmer Howard, *The Chief: Doctor William Osler* (Canton, MA: Science History Publications, 1983).

deepened her niche in the Oslers' affections and made her a welcome visitor both in Baltimore and Oxford, where she played her part in the entertainment of the many young people who visited "The Open Arms," the affectionate nickname of the Osler residence.

Osler's Letters to Marjorie

The affection which Osler displayed for very young people and his practice of corresponding frequently with his friends have been amply documented.[12] Because the great majority of Osler's published letters were to men, and in view of Osler's waking and sleeping concerns with Marjorie, I present below excerpts from Osler's 94 letters and postcards which were found in Marjorie's belongings at the time of her death in 1969. All save two were addressed to her. They were bundled with a note in Marjorie's hand reading "Letters from Doccie O. I only found these after Cushing's *Life* was published." In view of the close intimacy with Osler revealed in the letters, one wonders if Marjorie seriously sought in her belongings for the letters when Cushing's request for correspondence relating to the biography was broadcast.

The letters were written between 1904 and 1919; the correspondence was heaviest from 1909 to 1914, over which period 54 of them originated. Earlier letters to Marjorie have not been preserved. The 94 letters were available to R. Palmer Howard at the time of his preparation of *The Chief*; he dated each of them on the basis of his considerable research, a procedure which greatly facilitated my editorial task.

Of the 94 letters, all but one were manuscript communications; most were letters, a few were postcards. The notepaper employed was usually that of the Osler residence in Oxford, occasionally that of a hotel or steamship. One, a letter of 21 March 1907, was addressed to Marjorie's older sister Muriel, instructing her to purchase desks for Campbell and Marjorie as presents. A second letter, that of 28 November 1917 was directed to Bruce Futcher. The letters were devoted to expressions of affection for Marjorie, and later, her growing family; to references to mutual friends, many of whom had been recent visitors to Oxford; to news of Marjorie's half-brother in London, Jared Howard, his wife Margaret Smith Howard and their children; to the Oslers' current activities and

12. Cushing, *Sir William Osler.*

travels; and to William's illnesses. There were abundant references to Campbell Howard and to Osler's son Revere, whom Marjorie, 12 years his senior, held in affection. The letters transmitted little specific information on Osler's reading, philosophy, or positions on clinical medicine. From 1914 through 1918 there were frequent expressions of indignation with the Germans, and references to the activities of Canadian physicians in the war effort. The later letters refer to Revere Osler's death, to Marjorie's loss of a son, and to William's illness.

In selecting excerpts, I have attempted to emphasize the depth of Osler's affection and concern for those his junior, in this case for Marjorie; the fun he had in writing to them; and the humor he expressed. By way of comparison with the correspondence of a noted contemporary, J. M. Barrie, both men's letters reflect an analogous enjoyment afforded them by young friends.[13] Though similar to Barrie's in the humor they offer, Osler's letters to Marjorie differ in that they relate largely to family rather than to material affairs and were replete with medical terminology.

For her part, in speaking of Osler later to her children, Marjorie portrayed him as an adored, respected, caring, fascinating paternal figure. One can only conjecture as to the significance Marjorie held in Osler's eyes in his often amorously phrased letters, say when she was twenty-five. The fact that she preserved those received beginning in 1904 manifests at least her affection and respect for the writer. (I suspect she had once preserved earlier letters but that they were lost during her peregrinations). Marjorie also spoke to her children of Grace Osler in terms of love and respect.

The excerpted letters demonstrate the epistolary style employed by Osler in this series. Both the tone and repeated hyperbole can be sampled by a review of his salutations and adieus (see Appendix) from "Dear Little Missus" and "Light of my life — adorable superba," to "Docky O," "Faithful but neglected adorer," and "Egerton Y. Davis, Jr," the last being Osler's oft employed *nom de plume* for his invented medical reports. Sandwiched between these were references to Marjorie's various suitors, notably to the initially diffident campaign of Thomas Futcher, her husband-to-be. Included also is a record of Osler's interest in Marjorie's pregnancies and infants and samples of his admonitions to a newly-wedded couple that they save for the future. My explanations of obscure passages

13. Viola Meynell, ed. *Letters of J. M. Barrie* (London: Peter Davies, 1942).

appear in brackets. Punctuation, or lack of it, and capitalization are presented as found in the letters.

Tongue in Cheek

Whatever the significance of Osler's dreams, the mores of his period restricted to them Osler's close involvement with women other than his wife. But possibly not entirely. He may have been letting off masculine steam in his letters to Marjorie.

Upon the back of the following message from Osler, Marjorie wrote "Written by Doccie O. when in bed with grippe, March 17, 1905, Baltimore — Sent before leaving in May for England." It was the only pencilled note in the series and certainly met the high standards for fantasy set by Osler in his medical reports submitted under the E. Y. Davis pseudonym. He obviously enjoyed himself when writing this and other letters to Marjorie.

> Light of my later Life — adorable superba Absent from thee my heart languishes and I feel so desolated that neither my work nor play has any joy in it. With you and in your presence the smallest trifles of life are full of abiding happiness. That day you remember when I had a bad oyster at dinner — your sympathetic glance alone gave me the courage to swallow it. What could I not do under the greater exigences of life if only your guiding hand was always near Your devoted Egerton.

A letter was written to "Dear Darling" in the summer of 1905 when she was visiting her older half-brother, Jared Howard. The latter and his wife Margaret Smith Howard, along with three of their children, Arthur, Harry, and Frances, were residing at Donald Smith's (Lord Strathcona) Scottish west coast island of Colonsay. Reference was made to the Howard family and Marjorie in the postscript.

> We miss you very much and you should not go away and leave us so desolate I was sad to see you leave so tristeful yesterday and there was such a rush that I was not able to tell you how much I loved you on Mondays. Today of course, I am never so strong, cardiacally speaking I hope you got the letter from your other darling this am. I am sending on me — a bill, [illegible two words] Come back soon Your bereaved E Y-nior
>
> N.B. Punch Arthur
> Kiss the Lassie
> Greet R J B and
> the Hon M
> Hug the L. M. [Little Missus] } For Me!

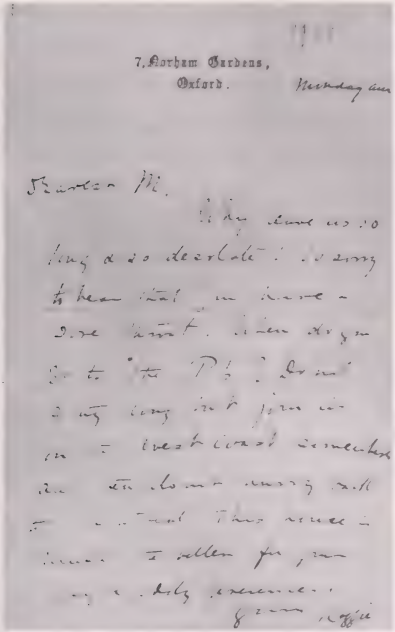

Figure 2. An Osler letter to Marjorie during her summertime visit to England, 1905.
Courtesy of Palmer H. Futcher, M.D.

Later in the summer of 1905, the Oslers too joined the family of Jared Howard on Colonsay, and subsequently William wrote from Oxford to "Dear D.":

> 'Tis not nice here at all without you — the house is lovely and we miss you so much. What a delightful time we had together at Colonsay! how glad I am that we went. and it is so nice for you to have such dear children to love and be beloved, until you have your own eight or ten — all called after the lost loves! What a happy thought! only do not tell Vic [a suitor of Marjorie's] . . . . Love to them all. Tell Arthur that I will meet him some day in the middle of Picadilly Circus, and will arrange to have a punching match with Harry in the centre of Lincoln Inn Fields Love to the girls too and to J and M. Yours W. O.

Osler, also in the summer of 1905, when Marjorie was still in England and he was planning to leave Oxford for a brief visit to Hale White of Guy's Hospital, wrote to her from 7 Norham Gar-

dens soon after he had assumed his new university post. Referring to Marjorie's relatives, the R. Jared B. Howards, he parodied the formal written invitation of the day as follows:

> The Regius Professor of Medicine (known familiarly as Reggie) presents his compliments to Miss Marjorie Howard and requests for himself the pleasure of his company at luncheon with her and her family at 51 Queen Anne Street on Friday, if the Hon. M and Mr. R. J. B. would be glad to see him. A line sent care of Dr. Hale White 65 Harley St. would delight her faithful but neglected adorer.

A recurrent statement in the letters was Osler's regret that Marjorie was not in Oxford, coupled with the wish that she come to England soon. He reported that his sentiments were shared by the many young men whom Marjorie had met at the Oslers' house. He offered to pay her way to England.

Marjorie's Admirers and her "Fluttering Heart"

Osler kept himself informed of Marjorie's admirers and sometimes raised defenses against suitors whom he may have regarded as threats to his territory. On 13 January 1906, he wrote "Dear Lassie" referring to a beau who apparently was a resident in Halifax at the time:

> . . . Please do not get into the Halifax habit — I am sure the climate is not good for you and after you have seen Vic and had (1) one sinistral, (2) two dextral, and (3) three ambidextral hugs, hurry to Norham Gardens . . . . Yours Reggie

On 2 February 1906, when visiting in New York, Osler wrote "Dearest Missus" referring to her rupture of her engagement to the Canadian Victor Drury:

> What a shock you gave the boys! No one suspected anything in Baltimore. Miss Bonner [the housekeeper at Hopkins Hospital whom Osler had visited recently and who doubtless was informed of the preferences of eligible men on the staff] thot you were rather devoted to "deary" [T. B. Futcher] but I said that he had never been attentive! Campbell [Howard] seemed very pleased Now what are you to do! You cannot possibly stay on this side and twist your fingers and leave you arms unexercised! You must come to Oxford where you can keep up your practice on poor Reggie and the Rhodesians [Rhodes Scholars who frequently gathered at the Oslers' house in Oxford]. March

> 25th is the date I have fixed — earlier if you wish . . . . Blessings on you. Your affec Reggie

On 31 May 1906, there followed Osler's word to "Dearest M" concerning an entanglement which may have been the same one mentioned in the letters of 13 January and 2 February:

> . . . Hurry to Oxford where we love you so much — do hope you can come very soon. You will need my cardiac support. Aunt G. [Grace Osler] told me of your fission — I am sure it is all right Do not worry — set your face toward the East and all will be well . . . . Yours ever. W Osler
> Campbell will be glad I am sure. [Presumably a reference to Marjorie's intention to join her brother who was studying at medical clinics in Germany.]

Osler wrote to Berlin and "Dear Darling," now age 25, who was there with Campbell, on 16 January 1907:

> . . . What a good time you've had in Berlin — did I not tell you so? Please be careful of Munsterberg — 'twould never do. What a desolation you are! . . . . We have not seen any of the boys — but on Sunday they will be at the New House — the *Open Arms* or the Always Inn. [13 Norham Gardens, to which the Oslers were moving from Number 7] I look after good old Manger's [another suitor, C. H. Manger, killed in World War I] interest with you and of course will read him your last to A. G. [contents of the "last" letter to Aunt Grace Osler are unknown — possibly it dealt with "Munsterberg"] Yours faithfully Reggie

On 29 January 1907 there was further avuncular advice to "Dearest M." in Berlin regarding Munsterberg:

> Do not, I implore you! succumb to von M's pertinacity! But perhaps he is very nice! I do not like German husbands for English or American girls. What a desolation you are. Do hurry home — all the boys [Rhodes scholars, etc.] are longing to see you. Good old Mange is so sweet. I really wish you could marry him in May from No. 13 [Osler's home]. I would give you away — in many directions . . . . Love to C. Yours. W. Reggie Davis

On 11 May 1907, Osler wrote "Dear Honey," who had become her brother Campbell's housekeeper in Montreal, where he was

practicing medicine. Marjorie, having lived largely with her now married older sister Muriel, had a new home base. The letter read:

> . . . I am sure you will get most comfortably settled in your new home. How is your fluttering heart? We shall miss you horribly. I wish you could live with us always. I will hug Mange for you. Your loving Reggie

On 2 August 1907, the message to "Dearest M." was:

> . . . You must come over next year for the eights [Oxford boat races]. Save a little money for it, like a good girl and if you have not saved I will save it for you and save you the trouble and send you a return ticket. Love to Campbell. Everyone feels that he will be a great success in Montreal. It will be slow of course but he must have courage . . . . Write again soon Your loving Reggie

On 14 March 1909, Osler wrote "Dearest M." from Florence concerning Marjorie's plan to accompany him from America to England later in the year. He makes reference to the young men whom Marjorie was accustomed to meeting at the Oslers' house in Oxford:

> Delighted to hear that we may be on the same ship. . . . . June 18th is the date — so secure a berth. Can. Pac. [Canadian Pacific] I have asked Bill [Francis] to get me one on the saloon deck, an outside lower. I am sorry you are not Campbell so as to have you with me. It will be so jolly to have you in Oxford once more . . . . You will miss the boys — the old boys — but there will be a few new ones *I have no doubt*. We are having a very happy time here — wonderful city — too many madonnas. Tell Campbell they come in 4 groups — the healthy, the anaemic, the chlorotic and the rachitic. Yours ever. W. O.

And Marjorie did sail to England with Osler in June 1909 for a summer in Britain and an event which was to dictate the rest of her life.

Showdown at Colonsay — Osler Gloats

Thomas B. Futcher's visit to England in 1909 coincided with Marjorie's presence there on holiday from her familial house keeping duties in Montreal. Thomas had continued on the Hopkins staff, and until the Oslers' departure for Oxford was their next-door neighbor. He had met Marjorie during her visits to the Oslers in

Baltimore before 1905 and was suspected by some as being smitten with her. Apparently it required encouragement from the Oslers, the details of which are unknown, to convince Thomas that before he returned to Baltimore from England he should pursue Marjorie to the Scottish west coast island of Colonsay, where she was visiting her half-brother Jared Howard. At Colonsay Thomas proposed to Marjorie. The Marjorie-Thomas affair was referred to in several of Osler's letters.

While Osler in later letters to Marjorie took credit, with his wife Grace, for promoting the liaison, in his first letter on the subject he felt that he had missed an opportunity. Thus, in the summer of 1909 he wrote to "Angel":

> What a double-dyed fool I was not to have spoken to T. B. He has had a cold chill — such as come over us men at times. He really cares very much but had the stage fright. But what a deuce of a mess we are in. But two things are clear (1) he is attached to you. (2) he is a good man — whom you could make better — and I may add (3) I believe you could be *happy* and safe with him. But talk it out with your own heart my darling. Your loving *Dad*

A letter to "Dearest Marjorie," subsequently dated by that lady herself "August 21, 1909" read:

> *Dee*lighted. I knew all would go well. You have a good man, not quite as good as yours devotedly, but with possibilities under your guidance. You are just the girl for him, "such a good business woman"! That brought him. I knew it would. We really managed well. A. G. [Aunt Grace, Mrs. Osler] the old darling says she made the match but we know! She is so happy. Our only regret is that you are not here with us. What a pity he cannot stay for a week or two. Just one regret — Campbell [Howard] and poor old Bill [Francis]! I fear B is hard hit! tho you do not think so. It could not be otherwise. Back Sept. 5th [from Swanage?] Hurry home to yours devotedly W. O.

From Swanage, Dorset, in late August or early September 1909, Osler wrote "Dearest Marjorie":

> Grace says you are a spoilt piece! So you are but you deserve to be so — and she just said "I think it rather hard to be engaged to a man and only have a few days with him. If I were in her place I would go home at once" Do nothing of the kind — come to see us first we are longing to see you. We have

had five glorious days here — such sunshine and sea — we have often said "how Marjorie would enjoy this!" . . . . How delighted your father would be! Campbell [Howard] I knew would be pleased. There will be all sorts of worries getting things settled but I will give you a few doses of "aequanimitas". I am very much [undecipherable] I see you a great success at B. [Baltimore] I will map out a programme — domestic, social and charitable — for you. Love and blessings Yours ever W. O.

P.S. extra. Grace says not to get too many clothes — so awkward! (I cannot write for laughing) they may not fit — Tom [Revere Osler] wants to know what we are laughing about. He is a crazy loon. Now Grace wants to see what I have written and we have had a deuce of a row. That ugly-mugged Tom is now looking over my shoulder.

P.S. 2 Grace says you will have an awful time with coloured servants — not necessarily if you follow her example.

P.S. 3 Tom says where are they going for their honeymoon! and suggests South America and a butterfly net.

P.S. 4 And last come home as soon as you can — not later than Tuesday. We have ordered the German Band for 12 o'clock!

Continuing on the subject of her engagement to Thomas, Osler wrote "Dearest Marjorie" on 18 September 1909:

We miss you sadly and I weep a little weep every day for you. It was very sad to part from you, but it is nice to feel that you have gone to such a dear fellow. Think of his joy and of the sinistral (or perhaps) ambidextral hugs! [Tom Futcher was left-handed in sports] *I did it* We did it. What a joke. Do not tell him until you have him tightly tied. Tom [Revere] felt very sad about you. He really loves you dearly and as for Pearl [Grace Osler] she just had a little cry all to herself . . . . Love to Campbell and Muriel [Howard von Eberts] and Bill [Francis] How they will miss you. We have great comfort in looking back on such a happy summer. We really had a very good time. Tom F. and that red book caused the only worry [reference not clear]. Lucky I had not to [illegible] it. Blessings on you darling. Your loving. Doccie O.

The letter of 8 November 1909 to "Dearest Little Missus" read:

A-G. [Aunt Grace Osler] just read your nice long letter — what a time you are having! and what money we are spending! Gee

> whiz! You must be distracted with so many things to do. I wish I was there to help! It was a great day when we started from Quebec [Marjorie had sailed for England with Osler in June 1909] with an *idée fixe* about Tom Futcher. I knew it would turn out all right. We shall have the bells rung at Ch.Ch. [Christ Church College] and prayers — if you think it necessary on the 24th [Marjorie's wedding day] What a pity we cannot be there! I wish we could have had the wedding at Ch.Ch. You and Tom would have looked stunning going down the aisle . . . . Your loving Dad

There followed for "Dearest Marjorie" a letter of 24 November 1909:

> You have been much in our thoughts today and we have wished much to be with you but our blessings have had to go by cable. We are awfully happy about the whole affair, and so rejoiced that you are marrying an old friend — of yours too! We made a pretty good job of it after all! I hope this will reach you in N.Y. You will have a very happy time and do not hurry home. Let the old house wait. What a reception you will have in Baltimore. Everyone writes so enthusiastically. Poor old Campbell [Howard] and Bill! [Francis] but 'tis the way of the world and they will get on. You have been an angel to them. I wish you were here to have a hug and a kiss from Yours devotedly W. O.

A postcard transmitted December 1909 related:

> You extravagant girl! The "Pearl" [Grace Osler] has just opened your present from Altman's and she is delighted. I too. I see you have put *O* on it. Meaning me. We are so anxious to hear how you are getting on with the house [Franklin Street, Baltimore] and whether you have tired of T. B. [Futcher] All goes well — only we miss you. Yours W. O.

Thus in 1909 Osler gloated over whatever part he and Grace played in Marjorie's engagement and marriage and was "awfully happy about the whole affair." But, as we shall see, he was to report in April 1912 that the latter sentiment was not always sustained. Had Marjorie's marriage deprived Osler not only of a semi-adopted daughter, but of a permissible outlet, via correspondence, for his maleness?

Osler's Transatlantic Obstetrical and Pediatric Practice

One wonders if Osler to some degree fantasized Thomas Futcher, who had served under him as chief medical resident and was a fellow Canadian, as his proxy in the evolution of a young family. Whatever his fantasies, Osler took great interest in Marjorie's first pregnancy, writing to "Dearest Marjorie" on 14 February 1910:

> Tis simply scandalous! you must take carotidene [reference obscure] my newly discovered cunctator! ["a delayer" — possibly as regards her menses] Isaphaena [interpreted by R. Palmer Howard as meaning "equally brilliant as her mother"] must not arrive until the 1st week of September. But is it not delightful — morning sickness and all. I knew you would give Eve points. If she could only be twins — two girls Chichestina and Isaphaena. perhaps she is. Grace is so excited. I do hope you will keep well. Be careful — no dancing and rest comfortably part of each day. Later I will send you a list of reading for her edification — like the girl in the ordeal of Richard Feverel. It is most important, and help with teething and temper and all thro. life. I hope she will be like you. What an angel you are! Only I hate to have you so far away. Just to think when I see you next it will be with twins. I will have the horoscope cast in London by Nicholas Culpepper, who is very expert in these matters and what is most ominous is the twin tail of this new comet. [Halley's] So lay in a double supply of baby-linen . . . . How I wish you were joining us at dinner in ten minutes — you and Tom and the twins! Perhaps next year! Your loving Dad.

A letter of March 1910 to "My dearest Little Missus" was either clairvoyant or dictatorial, in that Marjorie eventually selected the name of her father — and Osler's teacher — Palmer Howard as that for her first born:

> Here are two of the earliest from your pansy bed — one for Isophaena the other for Thomas Palmer Howard — Place one on the right side, the other on the left attached with pink ribbon for the boy, blue for the girl and it will soothe them and prevent all intrauterine quarrelling. [One of the two pansies is preserved with the letter] I have known this most helpful in arthritis, morning sickness, obesity and all sub-diaphragmatic troubles in the newly married. Your letter just received by G. was delightful we love you all three more than ever and I miss you sadly. *But we did* do a good stroke of business for Tom Futcher — père — did we not? Your loving Dad.

The letter of 3 April 1910 to "Dear Darling" reported in part:

> The thought of you and Tom Futcher in bed together on Sunday morning (all four of you!) sounds scandalous! But has it not been a great success. I knew we could arrange it and he is an angel. I am just longing to see you . . . . No one can take your place and we miss you horribly. Your loving Dad.

The letter of 3 August 1910 to "Dearest Marjorie," at the start of Osler's visit to America commented on one of his illnesses:

> Very good trip, but not so nice as that of last year when we did the business of T. B. F. [referring to Osler's eastward voyage to England on which he was accompanied by Marjorie] What a year it has been! and so nice to think so full of happiness for you . . . . I have kept pretty quiet. There have been rumblings as if another chip may be breaking off Gibraltar [a reference to his recurrent symptoms of kidney stone] . . . . I am dying to see you and the twins. I do hope they will arrive before we leave. Mention the date of our sailing to them. By this time they must be friendly little souls . . . . Love to T. B. Palmer and Isaphaena. Kate [Mrs. Harvey Cushing, then a Baltimorean] and her chicks. Your loving Dad.

Osler's message of 10 August 1910 to "Dearest M." from Pointe au Pic on the Lower St. Lawrence was:

> I will be in Baltimore Sunday morning the 21st thro. from Buffalo. And if the twins are not in the spare room perhaps you could take me in. It will be delightful to see you again . . . . Yours Ever W.

"Dearest M." was informed in Osler's letter of 24 August 1910 from The Glades, Massachusetts:

> What a delight to see you and Grace [apparently Osler had rechristened Marjorie's unborn child] (and so much of you both) It was worth crossing just to have the three days and to see you so happy What an angel you are! No wonder T. B. F. is crazy about you . . . . My blessings! and many thanks Mrs. F. for your kind hospitality. My greetings to Gracie Your loving Dad

Years later, in 1919, Marjorie did christen her fourth child Grace Revere Futcher, after Grace Revere Osler.

On 14 September 1910, a day after the birth of Marjorie's first child, Osler wrote to "Dearest Marjorie":

> It was a great delight to have the cable. We began to fear lest there had been a mistake and that it was all *fat*. *DO* be careful now — do not let the modern Doctor get you up too soon. I always kept my confinement cases in bed three weeks. Wear a bandage to keep your figure in order and get that spreading waist within encircling limits. We shall look for a long typewritten account of Palmer Howard from his Pa. I am afraid you will have to adopt a puppy to keep the "White Mountains" as Revere calls them from bursting. I would give a good deal to see you in bed with this *first*. But I am sorry he is not twins. I had set my heart on two and it was mean to disappoint your friends . . . . Blessings on you both and love to the fond Pa. Your loving Dad.

In his letter of 16 October 1910 to "Darling Lactea" Osler wrote:

> We just talk of you and Palmer all the time and I very nearly take the steamer every Saturday. Your letters are splendid and we love to hear details — weight, girth, pinkness of the toes, color of the eyes teeth — hair, is it black and has he much — is it (hair) rubbing off already. Has he signs of the Gissonian Krankheit? Are there beads on his ribs? TBF will be watching for all these things. I do hope he pukes easily — 'tis such a good sign. [There follows one of Osler's admonitions to save money] Your loving Dad.

The letter of 16 December 1910 greets "Dearest Lactie" and like those which followed manifested Osler's fondness for infants and children:

> This will reach you Xmas morning and brings a heap o' love to you and your boys. What a happy year it has been for you, darling! We did it! I am longing to see the baby. What a cherub he must be and I know how sweet and kissable. What a time you will have with him. TBF will neglect his practice . . . . Be careful of yourself. Your loving Dad.

Having received a requested photograph of Marjorie and her infant, Osler wrote "Dearest M" on 4 January 1911:

> We have been just crazy over the picture — never, never did I see such darlings. The boy is a rouser and you look just . . . [twenty dashes] We have been watching for it every day. It is really one of the best pictures I ever saw. And your smile is angelic. What a sweet face the laddie has and without a trace

> of resemblance to Pa or Ma — no reflexion on their faces all the same — and he sits up like an old man. I am really jealous of Tom Futcher that he has him to squeeze and kiss. Do be old fashioned and let him have a few good hugs daily. It does a baby so much good to spill over mechanically . . . . That old fool Grace has interrupted me again by holding up the photograph for adoration . . . . Blessings on you darling. Your loving Dad.

On Sunday, 15 January 1911, Osler wrote "Dearest M":

> So nice to have your letter this morning (To Grace, but family letters are all the same and she is the only one who can read your!!) and to have such a good account of the boy — and your clothes We are just crazy about the photo — and G. trots it out on all occasions — the proud grandmother! Mrs. Jacobs (an expert) [Mrs. Henry Jacobs of Baltimore] wrote a glowing account of him . . . . Did you buy the baptismal *Moog* for the angel! a good one and have it lettered so that he can hand it on to the grandchildren. [Osler had been nominated Palmer Futcher's godfather] Love to both your boys. and to all old friends Your loving Dad.

Osler wrote to "Dearest Marjorie" 20 February 1911 from the *S.S. Seti* on the Nile, where he was vacationing with a brother at the latter's expense:

> Here I am on a great spree — only I wish you and the baby were here in this glorious sunshine. This is a beauty-boat holds six or eight . . . . I shall burst if I do not see the baby soon — it is just a shame that we are missing so much fun and I love a baby so. No chance of getting over this summer for me. I shall have to be good after this and stay at home. You cannot of course come over. Won't it be nice when the grandchildren are on the third floor. You must have another picture before long tho you will never have a sweeter one — if you have 10 chicks — than the one you sent. Everyone admires it so much. I wish we had it in a painting. G will let me know how you are and I will send picture post cards by which you will see my progressing. Love to T. B. and a hug for the darlings both. Yours ever Dad.

Also from the *S.S. Seti* on the Nile, addressed to "Dearest Marjorie" on 10 March 1911, Osler wrote:

> I would give a great tuft of my top hair to have you and the bairn here in this heavenly climate . . . . Love to the darlings Yours ever Dad.

On 21 March 1911, from Shepheard's Hotel, Cairo, Osler addressed "Dearest Marjorie":

> A letter from G. today says that you are *noch einmal in der Hoffnung* [Marjorie was pregnant with Thomas Bruce Futcher] Too bad you could not have had a little longer interval, but "tis the will of Allah" as they say here, and they will be darlings as they grow up together — so do not be downhearted. Only it knocks out any chance of seeing you this summer and I shall burst in two places if I do not see you before you are two times a mother. I hope you are not having a very bad time — be careful . . . . Keep up your courage, darling. You will be glad a few years hence. Love to all there. Your loving Dad.

In Osler's letter of 21 June 1911 to "Dearest Darling" commenting on his recent baronetcy, he wrote:

> What do you think of *Sir Billy*? How I wish you were here to squeeze. And Palmer . . . . I am just dying to see you and the baby. Its just a shame I cannot get out this summer . . . . I hope in time to welcome the twins. So much nicer darling to have an early crop. And grow up with them. Love to Muriel and her darlings. Your loving Dad.

On 31 August 1911, Osler wrote "Dear Darling":

> If that is not the sweetest picture I ever saw of Tom F. and the boy. No wonder you are both crazy about him . . . . Grace will come out in October some time. I envy her the sight of your nursery. I do hope there are twins — if not two *a* girl. We were planning today before your letter came for next summer — you and the babies at No. 13 [Norham Gardens, the Oslers' residence] Oxford is a splendid place for children. It would not be a hard trip and Tom could join you. Grace could wean the twins in Sept. while you and T. B. went off for a continental jaunt . . . . I cannot believe it is two years since that eventful summer *we* induced that nice man Tom Futcher to take a little journey in the world. I am always longing to hug you darling. Keep well Your loving Dad.

Responding to the announcement of the arrival of her second boy, Thomas Bruce Futcher, on 6 October 1911, Osler wrote "Dearest Marjorie" on 7 October:

> Tom's cable came at 7. this a. m. Bully for you! a splendid record! I wish for your (and my) sake it had been a girl but boys are not bad. And in the years ahead you will be reconciled

> to the "quick return" method which you have started. Now take a rest. We shall expect you and the babies over next year. It would be grand fun to have you all. Grace will see you before long — I envy her Good bye darling — a Kiss to both the boys. Your loving Dockie O.

The only typed letter saved by "Dearest M," dated 15 November 1911, read:

> I was delighted to have your letter and have good news of the laddies. I have never yet sent you the money for Palmer's Porringer, Miss Humpton [Osler's former secretary who continued to perform missions for him in Baltimore] will hand over to you 35 dollars, if that is too much, buy a supplementary lacteal pouch for little Tommy [Thomas Bruce Futcher]. Revere is delighted to have been asked to be Godfather. Young reprobate! he is not eligible I believe as he is not yet confirmed. Please do save a little money this winter and come over next winter. It would be just splendid to have the chicks on the top floor. I hope A. G. [Aunt Grace] has arranged all about it. She and R. may go out in August, but I could take you out in September. Love to T. B. F. Affectionately yours, W.

"Dearest Marjorie" received the following letter written on 15 December 1911:

> Xmas greetings to you and yours! It has been delightful to hear of you and the babies thro Grace who was greatly pleased with the crop. I am longing to see them — and you. G. gives a good account of your condition only I am sorry you have an aching back — that will soon go — and the babies are worth it. I hope you may go to Campbell's wedding [to Ottilie Wright, of Ottawa] tho it is an undertaking to travel so far with a nursery. It would encourage the bridal party . . . . I enclose $25 for your boy — the old christening present which he should have had long ago — buy a porringer with it from me. My love to your Tom . . . . Your loving Dad.

On 28 April 1912 Osler wrote "Dearest Marjorie":

> What a splendid picture of you and Bruce! Is he not a darling? And you look so well and with your hair so nicely waved and I am sure you are as happy as you look. Only I do wish you were coming over here this year. I never see you any more and Baltimore is very far away. Why did you marry that old Tom Futcher? You were an old . . . darling! . . . . You must arrange

Figure 3. Thomas B. Futcher, Palmer H. Futcher (sitting), and Bruce Futcher (standing), circa 1918.
Courtesy of Palmer H. Futcher, M.D.

> about next year — save the girl for 1914! Love to you all Your loving Dad.

On 10 December 1912 Osler wrote "Dearest Marjorie":

> It is just splendid to hear your nice letter read out, with all the details about the darling What a time we shall have next summer. Of course you must come. The upper floor is yours — always was, and did we not always talk of the day when the gate would have to be put at the head of the stairs! The angels would be no trouble and the garden and back cove just the places for them. I shall sail from Montreal about the end of the 3rd week in May [after the Yale lectures]. Why not come with me? I am a very good nurse maid at sea . . . . Yours ever Dockie O

In February or March 1913 Osler wrote "Dearest M.":

> Were there ever sweeter looking chicks! We are enchanted with them and Grace goes about purring as if they were her own. I have never known her so crazy about anything. Bruces mouth

> means business — such a determined face. What a happy time you and T. B. must have with them. Do come over early and cut that old Cacouna [summer resort on the St. Lawrence River]. I am sailing about the 6th Should reach B. on the 15th. Can you give me a bed — preferably in the nursery . . . . Love to all Your loving Dad

"Dear Mrs. Futcher" was Osler's salutation of 27 April 1913 from New Haven, following his "Way of Life" lecture:

> Thank you so much for your kind hospitality [referring to the offer of lodging in Baltimore] . . . and with you Sunday in time for supper. Do not have anyone. We can have a quiet time. Hug those darlings. Gee Wiz! Muz [Grace Osler] as Revere says these are stunners Love to T B. Your loving D. O.

On 9 May 1913, after his visit to Baltimore, Osler wrote "Dearest Mrs. Futcher":

> Thank you most heartfully for you kind care of me . . . . There were many friends on the train [to Dundas, in Canada] I breakfasted with the Lyons — two sweet little girls. You really must have a couple of girls for my benefit . . . . Goodbye my darling. 'Twas such a treat to see you and T. B. and those Futcher boys — to say nothing of old Campbell and his family Your loving Docie O.

Osler addressed his letter of 29 June 1915 to "Dearest Marjorie." He had referred in a previous letter to Canadian wives who accompanied their soldier husbands to England — as indeed Campbell Howard's wife Ottilie [Wright] Howard had done with her children. Osler wrote:

> I fear from what Dr. Halsted wrote that the J. H. H. is not going to join the Columbia and Harvard unit. Should it do so and T. B. came over as Phy. you would have to come with the children The upper floor would agree with them splendidly. And you could have a nice rest . . . . Get a snap shot taken of yourself with the Futcher men. My love to Tom . . . . Your loving Docie O.

Osler, addressing his letter of 2 November 1916 to "Dearest M and T," wrote:

> . . . It must have been very jolly to have Ottilie and the children with you [Ottilie Howard had returned to America from England] Hurry up with a little girl. Is not little Muriel [daughter of Campbell and Ottilie Howard] a peach? I became devoted

> to her. and sometimes she has such a look of dear Muriel [Howard von Eberts, Marjorie's recently deceased older sister] in her eyes . . . . I wish we could see you and the darlings over here. When this horrid war is over perhaps you could come for a summer . . . . Kiss the laddies for me . . . . Your loving Docie O.

Marjorie became pregnant again and in his letter of 9 March 1917 Osler returned to his prognostication of twins, informing "Dear M" that:

> I hope all goes well with you and the twins — see please that they are both girls. How I wish I could see you and the boys. It seems ages since I was out there . . . . Love to Tom and the darlings Your Docie O.

Advice to Newlyweds "Now in the Days of Harvest"

A recurrent admonition by Osler to the newly-wedded Thomas Futchers was that they save money. Thomas, one of seven children born to a farmer in Ontario, depended for income entirely on his medical practice. Marjorie had a modest income from inherited investments. Osler himself had been in straitened circumstances until he married a well-to-do widow, subsequently developed a lucrative practice, and became the beneficiary of gifts of at least one prosperous brother. So, when writing to Marjorie on 9 January 1910, just two months after the Futchers' wedding, Osler's words were informed by his own experience:

> Now read Tom Futcher this part — (1) Has he his life insurance? Just do it this week. (2) Like good children begin to save money *this year* — well within your income from the start. Remember the character I gave you — as a good business woman! and you are [presumably referring to Osler's reputed representation to Thomas Futcher when he was considering marriage during his visit to England in 1909] Go slow about the house and be content to have things not just as you would like them at first. But I know you are both very sensible but unless you get the saving habit *early* it is not easy to acquire!

On 16 October 1910 the advice was:

> Now children, be careful. These are the full years. so save for the rainy days — 1/4 at least of your combined incomes each year! Be wise. You have sense. T. B. has none — i.e. where you are concerned. Nor would I!

On 11 November 1910, after Palmer Futcher's birth on 13 September, there followed:

> have you saved any money yet for the baby — Do be careful children. — now in the days of your prosperity. We are saving to buy a farm for Isaac [Revere] — he will never do anything at books. Love to all the boys and girls. — Susie Thayer [Mrs. W. S. Thayer of Baltimore] particularly. Your loving Dad.

On 20 February 1911, while his brother's guest on a Nile cruise, Osler wrote to Marjorie:

> It is a new sensation to be travelling [undeciphered] and no bills to pay. C. P. R. [Canadian Pacific Railroad] is up! Why did you and I not buy when it was low? Are you saving any money, darling? You should save your own income each year. That is what I try and make G. R. O. do but we do not always succeed, now that I am no longer in the swim of practice. Please be careful. There is much to do I know. and a baby [Marjorie's firstborn was still an infant] is an expensive luxury *but* — time flies and days of earning are short. and doctors are careless. T. B. is easy going and soft financially. You must be the capitallist of the firm.

Again, on 31 August 1911:

> *But* — careful children! are you saving money? Please do not be extravagant, but save something for the babies and enough for next summer trip [to Oxford].

And the economic strictures continued fast and furious:

> My love to your Tom. Do not let him work too hard. Make him save — do not let him dabble in mining stock or risky industrials! [15 December 1911] . . . . I hope you are saving money — careless extravagant thing! These are your harvest days remember. [21 January 1912] . . . . Save money children, now in the days of harvest. [14 August 1912] . . . . Are you saving money children! — do be careful. [10 December 1912] . . . . Do save money children, while you can. It will be cheaper to come to England than to go to Cacouna [Summer resort on Lower St. Lawrence River]. [23 January 1913] . . . . I hope T. is saving money — now is the time! [2 November 1916] . . . . Do save a little money and when *the war is over* come over for a nice six mos visit. [8 December 1916]

Osler and Marjorie Suffer Losses

Revere Osler died of wounds received in Flanders on 29 August 1917. Osler wrote "Dearest Marjorie" on 31 August:

> The dear Laddie has gone and we are left heartbroken . . . . We knew that it would come . . . . We expect Tom very soon. He will be happy at Orpington [site in Kent of a Canadian military hospital where T. B. Futcher was to be physician] and we will look after him. How I wish you and the darlings were coming! Blessings on you all and a hug for the lassie [Gwendolen Marjorie Futcher had been born 16 July 1917, thus allowing Thomas to leave Baltimore] Yours lovingly Docie O.

On 28 November 1917, Osler addressed "Dearest Bruce," Marjorie's second son, aged six:

> Revere was your godfather, and loved you very much; and we are all so sad that he has been taken away. We had hoped that he would have been a nice elder brother to you both. He has left you $500, which father will take care of and give you when you get to be Revere's age, 21. It will be nice for you to have as a memorial of your godfather — so keep it separate and when you grow up you can spend the interest every year. Your loving Docie O.

On 4 December 1917, after T. B. Futcher had succeeded Thomas McCrae as physician at the Canadian Hospital in England, Osler wrote "Dearest Little Missus" as follows:

> . . . It is nice to hear of the lassie [Gwendolen Futcher] and how she thrives. And the boys must be splendid. I am sending letters to them both with this as we are distributing dear Isaacs little savings. I will send the cheque to T. B. and he can invest it for them . . . . Your good man is doing splendid work. I am so glad he came over. He looks such a dear in his uniform. Love to you all Your loving Docie O.

Thomas Futcher returned to Baltimore in 1918 after a year's service in England. His son Bruce Futcher died of influenza on 6 November 1918. Osler addressed "Dearest Margery and Tom" on 12 November 1918:

> Our hearts are just aching for you . . . . What a calamity to have to part with the dear boy! . . . . How fortunate Tom was home . . . . Poor dears — 'tis a wound that can never heal. I remember your father's grief when little Bruce [one of Marjorie's brothers] was taken. How I wish we were with you. Ah

> me! these are sad days — no peace in our hearts. [The Armistice had been declared 11 November 1918] With deepest love Affectionately your old Docie O.

On 14 December 1918, Osler wrote "Dearest Marjorie" describing the plans to entertain Canadian and American families for Christmas:

> You and Tom are in our thoughts always! What a calamity to lose such a darling — and what a fine fellow he would have been. One of the tragedies about dear Isaac [Revere Osler] is the loss he will be to all the younger ones — your darlings and Otillie [Howard] and others. He would have been so helpful with his good sense, and sympathetic heart . . . . Love to you all Your loving Docie O.

On 16 February 1919, Osler sent "Dearest Marjorie" information on the endowment of the Tudor and Stuart Club at the Johns Hopkins University as a memorial to Revere, and referred to the birth of Grace Revere Futcher on 16 January 1919:

> Poor dear, we think of you so much. And of the enduring sorrow that must be in both your hearts. I hope the new little missus is thriving. How I wish we could have you with us. Yours W.O.

Envoi — William and Grace Osler, Marjorie and Thomas Futcher

Osler's final letter to "Dearest Marjorie" was written 5 November 1919 when he had symptoms of the pulmonary infection which led to his death at age 70, on 29 December 1919. He related:

> How I wish I could be transplanted to 1128 N. Calvert [the Futchers had recently moved to 1129 N. Calvert Street in Baltimore] just to play with you and the darlings for a few weeks . . . . T. B. will have had my letter. Devil of an attack — nearly blew the lid off. Worried poor Grace sadly, I never have had such a cough. I am still coughing. I believe the whole business has been senile whooping cough; sent to remind me that second childhood is at hand. Your two G's must be thriving. I am so glad you have the two of them. But alas! for that dear boy! Heavens! What a calamity for you both . . . . And what a loss not to have dear Isaac to be here as your darlings grow up! Yours ever. Docie O.

In retrospect, Marjorie had not been the only pebble on Osler's beach of attractive young women; others included Nora Gwynn, and Ottilie and Marion Wright. He interested himself in their loves. As he had for Marjorie, he offered them the wedding services of 13 Norham Gardens and Christ Church Chapel. It is unknown what special significance Osler's relationship with Marjorie may have had for him. He admired women of all ages and had many lasting friendships with them, notably with the American Mrs. Mabel Brewster. He had only one child, a son, and at the least he regarded the orphaned Marjorie as an unofficially adopted daughter. His epistolary fantasizing with Marjorie may have represented merely the carry-over to a mature correspondent of his playful style with children.[14] Any supposition of possible deeper emotional involvement is just that. Just as does the interpretation of Osler's dreams mentioned early in this commentary, the full significance of Marjorie for Osler remains enigmatic. Future study of any unpublished series of letters from Osler to other young women might elucidate the degree to which this particular relationship was emotionally unique; as already noted, Dr. Faith Wallis of McGill University thinks it was.[15]

Repeated references in Osler's letters to the presence of his wife Grace in the room with him while he was writing to Marjorie give evidence that Grace was fully aware of his affection for the younger Canadian woman. Osler wrote Marjorie on at least one occasion stating that she would already have heard of some event in a letter which Marjorie had received recently from Grace, indicating that Grace also kept in touch with Marjorie. No letters from Grace to Marjorie during William's lifetime are at hand, other than a letter initiated by Grace and completed by her husband. And I know of no letters from Marjorie to either of the Oslers which have been preserved.

Marjorie and Grace Osler continued to correspond after William's death in 1919. Grace herself lived until 1928. What was possibly her last letter to Marjorie reflects some of the same af-

14. Cushing, *Sir William Osler*; Robert E. Rakel, "Osler's Humanity as Reflected in His Interactions with Children and the Elderly," *Houston Medicine,* 1989, *5*:61–66.

15. The 78 communications which Osler addressed to Mabel Fitzgerald (1872–1973), were directed to a fellow medical scientist and bibliophile and were not reviewed by the author as probably not being germane; see E. H. Bensley, "Sir William Osler and Mabel Purefoy Fitzgerald," *Osler Library Newsletter,* February 1978; see note 3 above.

fection for her which William had manifested. She forwarded to Marjorie a copy of Cushing's *Life* inscribed:

> To Marjorie H. Futcher
> from Grace Revere Osler
> April 2nd 1925
> Oxford
> "The Little Missus"

Simultaneously, Grace wrote Marjorie a letter on the black-edged notepaper of widows of that day, quite incidentally referring to relief from a circumstance which had rendered difficult her relationship with W. W. Francis while he was editing the *Bibliotheca Osleriana* at the Osler house in Oxford:[16]

> April 2nd
>
> 13 Norham Gardens, Oxford
>
> Dearest Child
>
> I am sending an advanced copy of the biography to you and one to Campbell. It will not be out until the *16th* at least here — so please keep it to yourselves. I cannot resist sending it. *Be sure* to let me know if you have to pay duty and how much. I don't know what to do about it — but I must send one to you at once. I am sure you will love it — The Francis moved yesterday [from 13 Norham Gardens] — they have a wee house — they could have gotten a better one for Bill has saved plenty of money and never spends one penny on anybody — I am *alone* for a week but join Julia Shipley [presumably the wife of the Master of Christ Church College] in France on Monday and near Revere [his grave in Flanders] for Easter. Oh — child — the horror of being alone in the world — no man or boy is too awful!
>
> Scratched to catch the post.
>
> Affn
>
> Auntie G —
>
> Be sure to tell me about *duty* on account of others — and decisions of which copy I send — one bought here or in N.Y.

As for the Futchers, for their first 20 years together they prospered, save for Bruce's death in 1919. Thomas' medical consulting practice and Marjorie's small inheritance allowed them to purchase a large house in downtown Baltimore in 1919 which served as office

16. Frederick B. Wagner, Jr., *The Twilight Years of Lady Osler: Letters of a Doctor's Wife* (Canton, MA: Science History Publications, 1985).

and residence. In the late 1920s, they and their three children moved to a newly built house in the suburbs. Both of the senior Futchers assumed important social or medical responsibilities in local, and in the case of Thomas, national areas. But, in view of Osler's economic warnings of 20 years previously, and cited above, eventually William's spirit doubtlessly sighed, "I told them so." The depression of the 1930s brought serious financial worries to Marjorie and Thomas. The latter succumbed suddenly to a myocardial infarct in 1938. Marjorie remained a widow, sharing an apartment with her elder daughter Gwendolen. She died in 1969, aged eighty-seven. For the previous 70 years, rare had been the day when she had not spoken lovingly of the William Oslers.

Acknowledgments

Valuable assistance in the organization of this commentary was lent by Diana E. Long, then director of the Francis C. Wood Institute for the History of Medicine at the College of Physicians of Philadelphia; in the dating of the Osler letters and his related comments, by R. Palmer Howard of Iowa City, Iowa; and in the original typing of the manuscript by M. L. G. R.

Appendix — Osler's Salutations to Marjorie

A chronological tabulation of some of Osler's salutations and adieus to Marjorie elucidates the affection and hyperbole he characteristically expressed. Thus:

Dear Little Missus (2/7/04; 11/8/09)
Light of my later life — adorable superba (3/17/05)
Dearest M. (8/??/05)
Dearest D. (6 or 7/??/05; 9/??/05)
Dearest Darling (11/??/05)
Dear Lassie (1/13/06)
Dearest Missus (2/2/06)
Angel of light (6-9/06)
Heartless Creature (in text, 6 — 9/06)
Dear Honey (3/21/07)
Angel (9/09)
Dearest Marjorie (9/3/09; 9/18/09; 11/24/09; 1/9/10; and almost without exception, Osler used this salutation from 1913 on)

Dearest Darling (6/21/11)
Dearest Big Little Missus (4/13/13)

These florid salutations were paralleled by characteristic closings, it being noted that "Reggie" was a contraction of "Regius Professor" which Marjorie herself may have coined:

Docky O (2/7/04; 9/18/09)
Egerton (3/17/05)
Reggie (8/??/05)
Faithful but neglected adorer (1905)
W. O. (9/??/05)
Your loving grandfather (12/23/05)
Egerton Y. Davis Jr. (1/13/06)
Yours ever, W. Osler (3/16/06)
Your loving Reggie (11/28/06)
W. Reggie Davis (1/29/07)
Yours lovingly W. O. (10/30/08)
Your loving *Dad* (recommending Marjorie's fiancé, T. B. Futcher, 8/09; 11/8/09; 1/11/11)
Yours devotedly W. O. (11/24/09)
Your affectionate Dad (1/25/10)
You look down on me smiling every day from the top of my clock — just the same old darling Yours Ever, Dockie O. (12/10/12, with reference to a photograph)
Your loving Dockie O," or "Doccie O." became the usual signature after 1912, both salutations and signatures being noticeably less florid and more avuncular as Marjorie progressed in motherhood.

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The Physician in Political Caricature

WILLIAM H. HELFAND

Introduction

The physician treating his or her patient is an excellent metaphor for the political cartoonist. Artists and illustrators have long perceived parallels between politicians and physicians and their fellow health practitioners — pharmacists and dentists. For this reason, doctors have always figured prominently in political satire. Both physicians and politicians base their claim to status and acceptance on their ability to offer specialized advice on the health, prosperity, and welfare of those who seek assistance, with political figures offering advice even to those who do not seek it.[1] Further, it is at times a difficult matter for the average person to distinguish between solid thinking and persuasive quackery on the part of either physicians or politicians; there have been many occasions when people have been gulled by charlatans in both camps. Thus images of consultation, diagnosis, treatment, bleeding, preparing "solutions" for problems, and other medical procedures lend themselves readily to political comment. Parodies of well known paintings such as Rembrandt's "Anatomy of Dr. Tulp" show British prime ministers operating on the National Health Service or American presidents operating on an inflationary economy. The use of metaphors such as bleeding patients for increasing taxes or extracting teeth for restricting freedoms has been a staple in political caricature. The medical theme is capable of endless variation.

In the long history of political caricature, it is difficult to find an image more frequently used than that of the physician and patient. Examples of this medical metaphor can be found in all developed countries, and the published record has been limited only in certain nations by periodic restrictions in freedom to express opinions. With both relaxed and infrequent censorship laws in their country, the British have the longest sustained history in, and are generally acknowledged to be the masters of, political caricature, but they are not the only ones to have published memorable examples. A

1. Kate Arnold-Foster and Nigel Tallis, *The Bruising Apothecary: Images of Pharmacy and Medicine in Caricature* (London: The Pharmaceutical Press, 1989), p. 52.

Transactions & Studies of the College of Physicians of Philadelphia Ser. 5, Vol. 12, No. 4 (1990): 445-474
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Petitions against the Ruling Powers are Seditious and Perjure.
She must lye more hard Petitions are Rebellious.
A Petition is a Libel against Government.
She is Mad & must be confined in Chains!
They have ruined her Constitution
Thus to the proper Fee for such a Physician
Poor Brittannia!
Women of all England
against evil Physicians
Corrupt Members and
wicked Councellors
Britannia in Distress.

Figure 1. "Britannia in Distress," Anonymous, England. From *Oxford Magazine*, February 1770.
Courtesy of William H. Helfand.

substantial number of American, Dutch, French, and Italian artists also have used physicians in political prints. This review of British and American examples will show the variety of approaches used by caricaturists in exploring the medical theme as background for political commentary.

The Nation Sick

A common scene in political prints is the nation as a patient being treated by his or her doctors. "America in Distress" (No. 1), a print published in the *Royal American Magazine* in March 1775, a little more than a year before the start of the American Revolution, groups eight physicians diagnosing ailments and prescribing treatments for their weak patient. They give conflicting advice: "She is mad and must be chained; She must lose more blood," and it does not appear that any of the recommendations of the doctors will do much good. The comment of one, "Poor America," confirms this feeling. The print is by Paul Revere, a silversmith better known for his midnight ride, but, in truth, it was not original with him; Revere copied and slightly altered his print from an earlier version, "Britannia in Distress" (No. 2), which had appeared in England five years previously (see Fig. 1). Physicians in the British print included several statesmen active in political affairs in 1770, debating the nature of Britannia's illness and prescribing appropriate remedies.[2] The original caricature had been directed at contemporary British problems, mainly proposals for political reform, a recurring subject of more than routine interest in England. Revere's contribution was to modify the illustration and place it in a fresh setting by substituting America for Britannia and to change the issue to voice the colonies' concern over oppressive measures from its masters across the ocean.[3]

Indeed, Revere repeated his copying in "The Able Doctor, or America Swallowing the Bitter Draught" (No. 3) (see Fig. 2), which he published in 1774, taking his model from an issue of the *London Magazine* which carried a date only three months earlier (No. 4). The original British print showed Lord North, the prime minister,

2. The doctors are the Duke of Grafton, Lord Mansfield, and the speaker of the House of Commons, Sir Fletcher Norton.

3. William H. Helfand, *Medicine & Pharmacy in American Political Prints, 1765-1870* (Madison, WI: American Institute of the History of Pharmacy, 1978), p. 35.

Figure 2. "The Able Doctor, or America Swallowing the Bitter Draught," by Paul Revere, United States. From *Royal American Magazine*, June 1774. Courtesy of William H. Helfand.

and other British statesmen forcing America to drink bitter medicine while the kings of France and Spain watched. Revere, in using the print as an attack on the Boston Port Bill, inscribed the word "Tea" on the pitcher North is holding. The caricature is still another version of "Poor America."

Had he wanted to, Revere could have found many other examples in British prints with similar themes. Britannia was the patient in the earliest examples, and her physicians were usually those in power at the time the print was issued. As a symbol of the nation, Britannia was invariably shown in deplorable circumstances; flogged, half-drowned, run over, poisoned, and worse.[4] It was quite natural that she should be worked over by doctors.

One of these early prints, "The Evacuations" (No. 5), subjects a suffering Britannia to the powerful effects of an emetic which had been given to her by the prime minister John Stewart, Lord Bute, forcing her to relinquish England's overseas conquests.[5] As if this

4. Wendy Shadwell, "Britannia in Distress," *American Book Collector,* 1986, 7:1, 3.

5. Herbert M. Atherton, *Political Prints in the Age of Hogarth* (Oxford: Clarendon Press, 1974), p. 189.

indignity were not enough, the artist also had Lord Bute step on Britannia's ever-present shield and the spear and cap of Liberty, leaving no doubt as to his disdain. A second physician in the print, the novelist and surgeon Tobias Smollett, takes the pulse of Britannia while holding the handle of his cane to his nose. Illustrations of this gesture were plentiful in British caricature, for the hollow handle contained an aromatic substance supposed theoretically, at least, to prevent infection. In case Britannia has not had enough, Henry Fox, Lord Holland, is shown as a pharmacist holding a large clyster, or enema syringe, waiting patiently to use it. The print was accompanied by a lengthy verse, beginning with the following lines:

> Our Country Old England appears very ill O Sick Sick at heart. Since she took a Scotch Pill . . .

The Scotch Pill is an allusion to Lord Bute, an unpopular leader during his long term of office and consequently the butt of many caricatures. He and his administration were also physicians in a print of 1762, "The Cramers or Political Quacks" (No. 6). When offered "Composition of Peace," a reference to the peace with France that Lord Bute had proposed, Britannia turns away in disgust, complaining "How can I rest when my bowels are all in an uproar, I never can digest it." Bute himself, normally identified with a large jack-boot, suggests that the medicine be formed into a bolus and gilded.

James Gillray, the most influential political satirist of the late Georgian period, used the theme on several occasions. When Lord North and Charles James Fox took over the government in 1783, Gillray published "A New Administration; or — The State Quacks Administring" (No. 7), with North ready to make use of a large enema syringe. Twenty years later, in "Physical Aid, — or — Britannia Recover'd From a Trance . . ." (No. 8), Gillray showed Addington, then prime minister, and Hawkesbury, a member of his cabinet, attempting to revive Britannia with "gunpowder" so as to be able to meet the forthcoming challenge of the French. Then, one year later, in 1804, in "Britannia between Death and the Doctor's" (No. 9), Gillray remarked on the change in administrations as William Pitt again took over the government in response to renewed French threats of invasion (see Fig. 3). In this print Pitt proposes a "Constitutional Restorative" while Addington, dismissed for his equivocal measures, has only a mild "Composing Draft."

Figure 3. "Britannia Between Death and the Doctor's," by James Gillray, England, 20 May 1804.
Courtesy of William H. Helfand.

In 1816, the perennial problem of unwelcome taxes, not surprisingly a continual subject of attack in many countries in addition to England, was the theme of Charles Williams "The Crisis — or — Britannia in Danger" (No. 10). The doctors in this case were the chancellor of the exchequer, Nicholas Vansittart, and the foreign secretary and leader of the House of Commons, Viscount Castlereagh. The treatment, blood-sucking leeches and "Soporific Pills," obviously worsened Britannia's condition. By 1830, when Wellington and Peel were in power, things had not improved very much for Britannia, despite the panaceas they offered in William Heath's caricature of "State Quacks — or the Desperate Condition of the Wither'd Sisters" (No. 11). Their proposals, bleeding Britannia and her associates, Scotland and Ireland, for still more tax revenue, are challenged by other remedies presented by the physicians, or more properly, the quacks, in the background.

Uncle Sam

There are no American examples to match British caricatures in the period before the 1830s. In the early years, American caricatures

were derivative, and what few there were strongly resembled British prints. It was only during the administration of President Andrew Jackson that distinctive American political caricatures were produced, with almost all of these directed at Jackson's problems with the Bank of the United States. A good example is the 1838 lithograph by Edward H. Clay, "Uncle Sam Sick with La Grippe" (No. 12), which uses most effectively the theme of the nation being treated by doctors (see Fig. 4). But caricatures, as well as all ephemeral publications, require a grasp of current political events in order to understand their purpose. One month after they have left the editorial page, issues prompting a contemporary cartoon are often forgotten. With a print such as this, now 150 years old, considerably more effort is necessary to interpret its meaning.

The financial panic of 1837 was brought about by what many critics believed to be outright blundering on the part of the Democratic party. President Andrew Jackson, in 1836, had issued a notice to government land agents that only specie (money in coin form) and not paper bank notes would be accepted as payment for federal lands. The country's geographic boundaries at the time were expanding exponentially, and Jackson's Specie Circular soon helped deplete the banks of whatever hard currency was on hand. With the number of bank failures mounting rapidly, Jackson, as the doctor in the print, notes that the patient, Uncle Sam, has been overeating, but the patient asks, "How the deuce Dr. Hickory can I have been overeating when I'm half starved." Jackson is supported by his apothecary, in this case Senator Thomas Hart Benton, who carries an oversized clyster as his symbol of office. The nurse aiding Jackson is another member of the Democratic leadership, Martin Van Buren, who had assumed the presidency just before the Panic of 1837 broke. In Clay's caricature, the doctor and his aides attempt to cure the patient of overeating, but as their words indicate, produce only the double-barrelled effect of tying up the patient's bowels and giving him the grippe. Uncle Sam was forced to call in Dr. Biddle (Nicholas Biddle had been president of the Bank of the United States) in his attempt to return to the more conservative and centralized banking system which the Bank of the United States represented. The print is most effective in making use of several medical themes to criticize the fiscal problems of the Jackson administration. It is also the first published print to use two familiar symbols of the nation, Uncle Sam and Brother Jonathan (an earlier representation of the nation), in the same illustration. Finally, the scene depicted

Uncle Sam, you have been overeating, and Hippocrates says, "all people that overeat should burst."
Uncle Sam, take some more of my mint drops and here's an injection of the juice of Hornbug that I've prepared for you!
It is your over shoes Uncle Sam that makes you so sick
Pater Patriæ
Baltimore's
New Orleans
New York
Philadelphia

Figure 4. "Uncle Sam Sick With La Grippe," by Edward W. Clay, United States, 1838.
Courtesy of William H. Helfand.

also gives us one of the rare American depictions of the clyster, an instrument which figures so prominently in French political prints of the eighteenth and nineteenth centuries.[6]

A much cruder treatment of the same issue is a lithograph of 1834, "Uncle Sam in Danger" (No. 13). Again Uncle Sam is the patient, with Jackson and members of his cabinet treating him by two accepted medical procedures of the day, bloodletting and purging. In this instance, bleeding refers to the movement of federal funds from national to local banks. At the time, the Whig opposition was frightened at the prospect of funnelling money into "pet banks" of the Democrats where, they alleged, credit policies favored those who had voted the Democratic ticket. One of the onlookers advises Uncle Sam, "They are ruining your Constitution. These pills alone can restore your strength"; the pills he refers to are contained in a "Balot [sic] Box."

Uncle Sam continued to be advised by his doctors over the years. A rare wood engraving by F. Morse, dated 1860, just before the start of the Civil War, shows him receiving conflicting advice from two physicians (No. 14). Dr. North suggests "Constitution Drops, a capital remedy for an inflammatory state," reflecting the concern of the Union to preserve the nation and reduce tensions with the Confederacy, while his rival feels that "Amputation is indispensably necessary," an allusion to the secession movement that soon resulted in hostilities at Fort Sumter.

Uncle Sam and Brother Jonathan were not the only symbols of the United States used by cartoonists. Three female alternatives were America, Liberty, and Columbia, the last a choice which appeared frequently during the middle years of the nineteenth century. In an anonymous engraving in a magazine published in 1861, Lincoln was a homeopath and Columbia his patient (No. 15). He prescribed a mild homeopathic dose for her, in contrast to the more stringent remedies of his predecessor in office, James Buchanan, for as the message in the print noted, Lincoln wanted to be sure "that the union will be restored to position, health and vigor." None of the other symbolic candidates lasted, however, and eventually cartoonists settled on Uncle Sam.

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6. William H. Helfand, "Medicine and Pharmacy in French Political Prints," *Transactions & Studies of the College of Physicians of Philadelphia*, 1974, 42:17.

Figure 5. "The Doctor Administering His Gilded Pill," by Charles Williams, England, 29 March 1802.
Courtesy of William H. Helfand.

John Bull and His Doctors

England, on the other hand, after having used Britannia for some time, found another symbol, John Bull, and he has remained longer lasting in political prints than the woman he displaced. In caricatures in both England and the United States, the male image became a more frequent object of physicians' treatment, and more prints show either John Bull or Uncle Sam treated by their doctors than those with Britannia or Columbia as the patient. The earliest print that I have been able to find with John Bull being attended by a physician is "General Excise" (No. 16), a crudely drawn example by William Dent, dating from 1788, 26 years after the earliest print in which Britannia was treated. It is a forerunner of many later cartoons showing John Bull being taxed to death, in this case by William Pitt, the prime minister, and one of his ministers. This print is exceptional, for John Bull as patient does not really become an active subject until the beginning of the nineteenth century.

An 1802 engraving by Charles Williams, "The Doctor Administering his Gilded Pill" (No. 17), is a more common example (see Fig. 5). It shows Henry Addington, originator of the present system of income tax collection, offering a huge bolus, symbolic of this new imposition, to a slightly caricatured John Bull. Addington was invariably a doctor in political prints, treating John Bull in several other caricatures published during his brief administration, as he had similarly treated Britannia. For example, he is Doctor Sangrado, the physician in the popular French romance by LeSage, *Gil Blas*, in "Doctor Sangrado Curing John Bull of Repletion" (No. 18). Here the treatment he has prescribed is bleeding, the popular symbol whenever taxation is the subject.

Before he retired from active political life in 1824, Addington, later Lord Sidmouth, appeared as a physician in more than one hundred political prints, accompanied in most by his emblem, a soft-bag clyster.[7] But Britannia and John Bull were not his only patients; George IV, for example, was a frequent subject, being attended by Sidmouth in "Moments of Pain," "The Royal Cot, or the Great Babe Taken Ill," and "Consultation on the Best Cure for the Gout . . ." (Nos. 19–21). These prints, and a great many others, date from 1820, the period of George IV's divorce proceedings when Sidmouth was a relatively unpopular home secretary.

7. William H. Helfand, "Medicine and Pharmacy in British Political Prints — The Example of Lord Sidmouth," *Medical History*, 1985, 29:375.

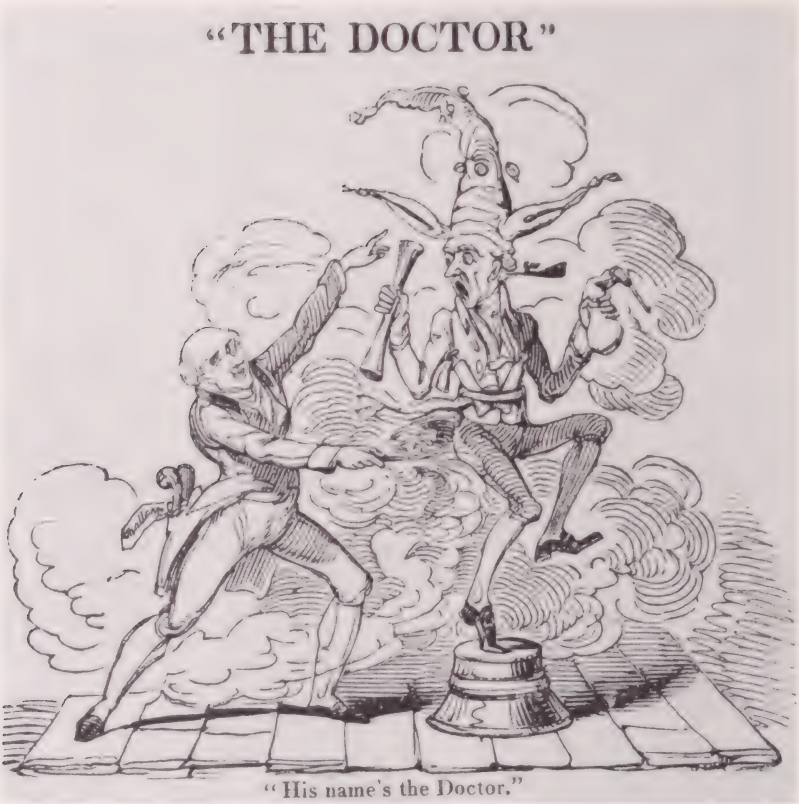

Figure 6. "The Doctor," by George Cruikshank, England, January 1820. Courtesy of William H. Helfand.

Political caricatures reflect their times, and often can provide evidence of significant events. One caricature by George Cruikshank, for example, "The Doctor" (No. 22), 1820, shows Sidmouth with a stethoscope, an early representation of the instrument which had only been described by Laennec within the previous year in his *De l'Auscultation Médiate* (see Fig. 6). Cruikshank expected his audience to understand what the stethoscope was, for he and his fellow caricaturists have generally relied on the public's accurate understanding of common medical practices. It is not surprising that the public would have a good understanding of consultations, bleeding, purging, and enemas, for these were procedures they had been subjected to personally. In recent years, cartoonists have used X-rays, genetic engineering, and other advanced medical techno-

logies in their illustrations, and because the public has had continual exposure to such advances, these artists have rightfully expected that their cartoons would be easily understood.

The first 30 years of the nineteenth century marked the most active period for caricatures of John Bull being advised by doctors. In these prints, John Bull is invariably shown as the puzzled, frightened or angry victim of his physician's efforts, being bled, given cathartics and enemas, phrenologized, ordered to take medicines — in short, being treated with every acceptable medical procedure of the day.[8] "Phlebotomising John Bull" (No. 23), an 1830 example signed "Longshanks," shows him as a rather fat victim being bled by three physicians, the Duke of Wellington, Robert Peel, and the King. "Radical Quacks giving a New Constitution to John Bull" (No. 24), an 1820 engraving by George Cruikshank, presents a victim for whom little more can be done, yet his two physicians are prescribing still more remedies, the major one being a large "Revolutionary Bolus." Drops, powders, mixtures, opiates, soporifics, and so on, have been tried and found ineffective, but bleeding is still being employed. The prescribers in this satire on proposals for parliamentary reform are the radicals Sir Francis Burdett and John Hobhouse. Similarly, in "John Bull & his New Doctor" (No. 25) published nine years later, the Duke of Wellington, then prime minister, is the doctor in an editorial comment on a proposed bill for Catholic Emancipation. Pills are prescribed to get rid of the patient's fever and irritation but John Bull notes that "the remedies are worse than the disease — they are undermining the constitution." And in "Dr. Arther & his Man Bob Giving John Bull a Bolus" (No. 26), by William Heath published in 1829, Robert Peel and the Duke of Wellington, two "Quacks from Church Street," attempt to stuff the troublesome bolus of "Catholic Emancipation" down the throat of their uncooperative patient.

Whether the patient is Uncle Sam, John Bull, or their female predecessors, these prints have in common the theme of a singular lack of success on the part of the doctors. The treatments in these caricatures were well known to the public, and their use in illustrations could be easily grasped, affording quick recognition of the artist's intent. But no matter what treatment was employed, the patient's condition inevitably got worse. This point is specifically

8. William H. Helfand, "John Bull and His Doctors," *Veröffentlichungen der International Gesellschaft für Geschichte der Pharmazie e.v.*, 1966, *28*:131.

Figure 7. "Extract Const. Amend.," Anonymous, United States. From *Harper's Weekly*, 27 October 1866.
Courtesy of William H. Helfand.

made in an 1802 British print of John Bull, in this case a rather healthy specimen, being worked on by two of Addington's ministers, who promise only to ruin his condition (No. 27). Despite his healthy appetite and proper sleep habits, to them he is still "A Desperate Case." Almost every example of a political figure in the role of a physician shows this negative attitude clearly and consistently, for the objective of the political cartoonist is invariably to emphasize deficiencies in the person or idea attacked. Political prints are much more effective in savaging rather than in praising a statesman or politician. Neither Uncle Sam or John Bull could ever hope

for improvement at the hands of their doctors no matter what heroic measures were employed.

Dr. John Bull

The versatile John Bull could be transformed from patient to doctor in political caricature, although this had never been the case with Britannia. Nor was it the case in caricatures of Uncle Sam; in the period before 1870 there are no political prints in which he is the doctor, and only one (as a pharmacist in an 1866 cartoon in *Harper's Weekly*) in which he appears in any professional capacity at all (No. 28) (see Fig. 7). However, Brother Jonathan did become Dr. Jonathan on at least one occasion. In "The Political Invalid" (No. 29), an engraving by Henry L. Stevens in an 1860 issue of *Vanity Fair,* he attends Stephen Douglas, one of many candidates campaigning in the election of 1860 eventually won by Abraham Lincoln; the doctor's comments refer to separate political conventions in which Douglas attempted to gain his party's nomination.

John Bull, on the other hand, played the role of physician frequently. During the spring of 1813 when Wellington began to succeed in battles against the French in Spain and Portugal, two prints were published with John Bull as the doctor. "John Bull's Patent Medicine" (No. 30), presents a sorely troubled Napoleon being offered a dose of "Wellington's Mixture" by the doctor along with "Russian Oil," a "Cossack Blister," and "Prussian Pills" to further aggravate the patient's condition. The second print, George Cruikshank's "Bleeding and Warm Water! or, The Allied Doctors Bringing Boney to His Senses" (No. 31), has John Bull giving Napoleon a large bolus labeled "Invasion of France." But this complex regimen goes beyond such simple treatment, for it also has Russia, represented by the Czar and a Cossack proposing a "constant application of a Russian knout," a Dutchman offering a mortar filled with "Dutch Drops," a Spanish Don applying a plaster of "Spanish Flies," and Bernadotte, Sweden's crown prince, and an aide bleeding the patient. Poor Napoleon! These two prophetic prints anticipated the accelerated reverses French forces experienced in the ensuing months.

The idea of John Bull as the physician was more frequently used in political caricatures during the second half of the nineteenth century. Several later examples include John Leech's "A Consultation About the State of Turkey" (No. 32), in which Napoleon III

Figure 8. "A Consultation About the State of Turkey," by John Leech, England. From *Punch*, 1855.
Courtesy of William H. Helfand.

Figure 9. "A Case for the Cold Water Cure," by Frank Bellew, United States. From *Harper's Weekly*, 23 June 1864.
Courtesy of William H. Helfand.

and John Bull review the possibilities of a nearly expired sultan (see Fig. 8); John Tenniel's "A Pill in Time" (No. 33), an 1876 cartoon in which Bull and representatives of five European nations also advise the proper treatment for Turkey; and "The Mad-Doctor" (No. 34), an 1867 cartoon also by Tenniel in which John Bull advises Hibernia on how he plans to solve Ireland's problems. "In a Bad Way" (No. 35), an 1887 caricature, has John Bull listening attentively through his stethoscope to Lord Salisbury, suggesting that the prime minister resign because of "great loss of power and general weakness." John Bull was even used in an 1864 American print, "A Case for the Cold Water Cure" (No. 36), in which he takes the pulse of Captain Semmes (see Fig. 9). Raphael Semmes had been

Figure 10. "Wonderful Surgical Operation," by Henry L. Stevens, United States. From *Vanity Fair*, 3 November 1860.
Courtesy of William H. Helfand.

captain of the Confederate warship, the *Alabama*, and had caused great damage to Union merchant shipping from the beginning of his operations in 1862 until his ship was sunk two years later (the "cold water" noted in the title). Throughout the Civil War, Britain had hedged its neutrality by selling arms and goods to both sides although it tended to sympathize with the Confederacy for economic reasons. John Bull's prescription for the "Yankeephobia" of Semmes was "iron" clad ships, but fortunately for the North, these new vessels were never released.

Other Physicians

In addition to these caricatures with their symbolic figures of Britannia, John Bull, Columbia, Brother Jonathan, and Uncle Sam, there

are also political prints in which one of the political personalities of the moment appears as the physician and, usually, one of his rivals as the patient. The same points are made, however; bleeding the patient for taxes, giving a clyster, pulling a tooth or amputating an arm or a leg to eliminate some momentary evil, or prescribing a "solution" or other medicine for a pressing difficulty. Many examples can be cited. Typical of the genre is the "Wonderful Surgical Operation" (No. 37) of 1860 in which Lincoln prepares to separate the Siamese twins James Buchanan and the editor James Gordon Bennett, both of whom were opposing his candidacy (see Fig. 10). A second surgical scene takes place in the lithograph "Professor Wise Performing a Surgical Operation in Congress Hall" (No. 38), a comment on the financial problems plaguing the Van Buren administration in 1839. The surgeon here is Henry Alexander Wise, a Virginia congressman and one of Van Buren's key opponents.

British examples are abundant. "Bleeding Extraordinary" (No. 39), an 1835 lithograph in which Wellington and Peel are bleeding Queen Victoria to increase revenue from taxation, is characteristic. As was the case in most British political cartoons published after Victoria became queen, the figures are only mildly caricatured, in contrast to their often grotesque appearance before the 1820s. When the Queen plaintively asks ". . . why did you not stick entirely to Mr. Bull?" Robert Peel's reply is that "I do not intend to forget the Old Gentleman, who by the way at all times bleeds very freely, but that I think it necessary to extract a little of the surplus from about the Court." Peel is the protagonist again in "Animal Magnetism" (No. 40), a lithograph by John Doyle published in 1838, where he mesmerizes Lord John Russell, then home secretary and for a long time the leading advocate for political reform. Coincidentally an American caricature with the same title was issued at the same time, with Andrew Jackson mesmerizing his patient, President Martin Van Buren (No. 41). Peel, along with the Duke of Wellington, his continual partner in political affairs, were obstetricians called in to deliver Parliament in Robert Seymour's "The Mountain in Labour — or, Much Ado About Nothing" of 1829 (No. 42), another comment on the battle over the desirability of giving Catholics the right to vote.

In portraying their country's political personalities, British cartoonists have often favored the clyster as a potent symbol because of its intrusive nature and cathartic effects. For example, Richard Brinsley Sheridan, the novelist and political supporter of Charles James Fox, uses a clyster on Fox in Thomas Rowlandson's "Loose

Figure 11. "The Two Sick Men," by John Leech, England. From *Punch*, 18 August 1860.
Courtesy of William H. Helfand.

Principles" (No. 43), a satire on the Regency crisis of 1789. And Napoleon was on the receiving end of a rather large syringe in an 1804 caricature, "Injecting Blood Royal or Phlebotomy at St. Cloud" (No. 44), in which he is given tiger's blood, useful in his case because the donor happened to be royal.

Another representation of giving advice or admonishment was by use of the plaster, a dosage form much more common in the eighteenth and nineteenth centuries than today. William Pitt wears a "Strengthening Plaister for the Conscience," given to him by Henry Dundas, Pitt's Secretary of War, in Isaac Cruikshank's "The Treasury Spectre, or the Head of the Nation in a Queer Situation" (No. 45). This print was issued at a moment when Pitt was, in fact, quite ill. Similarly, a plaster labeled "A Prize for his Russian Task" is offered to Lord Palmerston by Doctor Punch in "A Plaister for Pam" (No. 46) published in *Punch* in 1858.

As we have seen, leaders outside of Britain and America have also had their share of treatment. Other examples include John

Figure 12. "Doctor Bismarck," by John Tenniel, England. From *Punch*, 12 August 1882.
Courtesy of William H. Helfand.

Leech's "The Two Sick Men" (No. 47) of 1860 (see Fig. 11); here Napoleon III offers a bowl of gruel to the Sultan as the Pope complains of treatment he has received from the same doctor. In "Doctor Bismarck" (No. 48), a print of 1882, the German Chancellor offers his advice to a group of European countries (see Fig. 12). Bismarck himself became the patient in an elaborate Italian caricature by Augusto Grossi, "Malattia Equivoca" (No. 49), in which several political problems are reviewed. And Napoleon, normally attacked by British artists in political prints, could, on occasion, be the physician himself, prescribing for or treating his steadfast enemies. Charles Williams's "Doctor Boney — Bringing the Powers to Pot" (No. 50) is a good example (see Fig. 13). It appeared in March 1808, when Napoleon had conquered all of Europe except England, Sweden, Russia, and a few other small countries. Yet both in the print and in actuality, those remaining countries refused the Emperor's offer. In addition, Napoleon and

THE
LAST PAGE OF HUMILIATION
Aye you may well stare there is a pot preparing for you
Russia Pot
Austria Pot
English Pot
Swedish Pot
DOCTOR BONEY bringing the Powers to Pot or JOHN BULL and his Friends rather Shy.

Figure 13. "Doctor Boney — Bringing the Powers to Pot, or John Bull and His Friends Rather Shy," by Charles Williams, England, March 1808.
Courtesy of William H. Helfand.

William Pitt were "Rival Accoucheurs" (No. 51) in a print issued in 1800, probably by Ansell, satirizing Pitt's policy of subsidizing continental powers.

As would be expected, American politicians have appeared as physicians in American prints, and British statesmen, especially prime ministers, have usually appeared as physicians in British political caricature. Both Gladstone, in "The Gladstone Pill" of 1860 and "The Mixture as Before" of 1887, and Disraeli, in "The Revival of Trade" of 1879 were so treated (Nos. 52–54). The Duke of Wellington, the subject of "Sending for the Old Doctor" (No. 55), a print published late in his career in 1851, was the physician on more than one occasion. Arthur James Balfour and Joseph Chamberlain were both physicians in "An Extra Liberal Dose" (No. 56) (see Fig. 14), published in 1885, and in more modern times, even Winston Churchill has been employed as a physician by the cartoonist (No. 57).

Real Physicians

Not all doctors in these political caricatures were congressmen, ministers, or statesmen playing the role, for at times artists used real physicians. One early British example shows Samuel Musgrave, a practicing physician in Plymouth in the mid-eighteenth century, proposing certain treatments for Britannia, including "Tincture of Magna Charta" and "Essence of Bill of Rights." In "Dr. Musgrave Prescribing for Britannia who is in a Deep Consumption" (No. 58) he is, however, followed by four political leaders who also show concern. Musgrave had claimed to have evidence that the Prince of Wales (later George IV), Lord Bute (John Stewart), then prime minister, and Lord Holland (Henry Fox), one of the figures in the print, had accepted French bribes, and the anonymous artist used this allegation as background.[9] None of Musgrave's claims were valid.

One real physician, René Nicolas Dufriche Desgenettes (1762–1837) chief physician to the armies of Napoleon's Egyptian campaign of 1799, appeared in several of the many British prints that drew attention to atrocities committed by Napoleon. At Jaffa, on his retreat from Acre, Napoleon was faced with the perplexing problem of dealing with his plague-stricken soldiers, then being

9. The figures behind Musgrave, in addition to Lord Holland, include the Duke of Bedford and John Wilkes.

Figure 14. "An Extra Liberal Dose," by Linley Sambourne, England. From *Punch*, 25 July 1885.
Courtesy of William H. Helfand.

cared for in a military hospital.[10] Just a few months earlier, passing through the same place in his conquest of North Africa, he had demonstrated Christ-like behavior in touching these same patients, an event later memorialized by a monumental painting by Baron Antoine Jean Gros which now hangs in the Louvre (No. 59). Napo-

10. William H. Helfand, "The Poisoning of the Sick at Jaffa," *Veröffentlichungen der International Gesellschaft für Geschichte der Pharmazie e.v.*, 1975, 42:79.

leon discussed his new-found predicament with physicians, surgeons, and other members of his general staff. The idea of administering opium came from these discussions, and was proposed by Napoleon in a subsequent meeting with his physician-in-chief. The glorious reply that he received has been recorded by several commentators and remains a classic statement of the physician's obligation to those under his care. In Desgenettes's own words:

> General Bonaparte had called me . . . to his tent, where he was alone with his chief of staff. After a short preamble reviewing our sanitation problems, he told me ". . . were I in your place I would immediately end the sufferings of the plague patients and I would terminate the dangers which face them by giving them some opium." I answered simply, "my function is to save." Then the General very calmly developed his idea, saying he advised for others that which he would want for himself in a similar case. He asked me to note that he was charged with maintaining the army, and as a consequence, of preventing our patients from falling, alive, to the Turks. "I am not trying," he continued, "to demolish your resistance, But I think I will be able to find people who can better appreciate my intentions."[11]

What followed was much less heroic. Rebuffed by Desgenettes, Bonaparte immediately turned to his chief pharmacist, Jean-François Royer, and found a more docile and willing agent to carry out the fatal order (No. 60) (see Fig. 15). The event became the subject of several prints, rare in the corpus of British caricature in that the physician's act, in this case Desgenettes's heroic denial, is shown favorably. Of the many examples that can be cited, two give their flavor: Charles Williams's "French Alias Corsican Villainy or the Contrast to English Humanity" (No. 61), and a print by R. K. Porter, "Buonaparte Ordering Five Hundred & Eighty of his Wounded Soldiers to be Poisoned at Jaffa" (No. 62).

Conclusion

In all, I have been able to record more than two hundred British political prints published between 1672 and 1900 with a physician diagnosing or treating a patient. The number of American prints with a similar theme is less in the period before 1870, but increases

11. René Nicolas Dufriche Desgenettes, *Histoire Médicale de l'Armée d'Orient* (Paris: Firmin Didot Freres, 1830), p. 245.

Figure 15. "Poisoning the Sick at Jaffa," by George Cruikshank, England, 29 November 1814.
Courtesy of William H. Helfand.

considerably in the last 30 years of the nineteenth century, so that there is probably an equivalent number. Of course, this is not a complete list, for the total number of such caricatures remains unknown. Nor is the total number of all British, American, or any other country's caricatures fixed with certainty. The *Catalogue of Political and Personal Satires Preserved in the Department of Prints and Drawings in the British Museum* lists more than 17,000 British prints in its 11 volumes, but many additional examples, not included in the collections of the British Library, have been discovered since its publication.[12] The American collection still awaits its bibliographer. This is part of the charm and importance of these prints; it is still possible to find novel, or at least unrecorded, examples of the physician at work as well as other medical and pharmaceutical subjects. The concept of the physician administering to the ills of the nation, or possibly prescribing for one of his rivals, remains strong, and is as fresh today as it was in the seventeenth century. Today, however, we should say his or her rivals, for Margaret Thatcher (No. 63) has now joined the long list of predecessors

12. Frederic George Stevens, ed., *Catalogue of Prints and Drawings in the British Museum, Division I, Political and Personal Satires,* vols. 1–4 (London: The British Museum, 1870–1873) and Mary Dorothy George, ed., *Catalogue of Political and Personal Satires Preserved in the Department of Prints and Drawings in the British Museum,* vols. 5–11 (London: The British Museum, 1935–1954).

on the British political scene who have acted as doctors in these caricatures. And who knows who will be next.

List of Political Caricatures Cited

Note: BM numbers in the figure captions refer to Frederic George Stevens, ed., *Catalogue of Prints and Drawings in the British Museum, Division I, Political and Personal Satires,* vols. 1–4 (London: The British Museum, 1870–1873) and Mary Dorothy George, ed., *Catalogue of Political and Personal Satires Preserved in the Department of Prints and Drawings in the British Museum,* vols. 5–11 (London: The British Museum, 1935–1954).

1. "America in Distress," by Paul Revere, United States. From *Royal American Magazine,* March 1775. See William H. Helfand, *Medicine & Pharmacy in American Political Prints, 1765–1870* (Madison, WI: American Institute of the History of Pharmacy, 1978), No. 45.

2. "Britannia in Distress," Anonymous, England. From *Oxford Magazine,* February 1770. See BM 4368.

3. "The Able Doctor, or America Swallowing the Bitter Draught," by Paul Revere, United States. From *Royal American Magazine,* June 1774. See Helfand, *Medicine & Pharmacy,* No. 44.

4. "The Able Doctor, or America Swallowing the Bitter Draught," Anonymous, England. From *The London Magazine,* April 1774. See BM 5226.

5. "The Evacuations or An Emetic for Old England Glorys," Anonymous, England, 3 November 1762. See BM 3917.

6. "The Cramers or Political Quacks," Anonymous, England, November 1762. See BM 3923.

7. "A New Administration; or — The State Quacks Administring," by James Gillray, England, 1 April 1783. See BM 6201.

8. "Physical Aid, — or — Britannia Recover'd From a Trance," by James Gillray, England, 14 March 1803. See BM 9972.

9. "Britannia Between Death and the Doctor's," by James Gillray, England, 20 May 1804. See BM 10,244.

10. "The Crisis — or — Britannia in Danger," by Charles Williams, England, November 1816. See BM 12,812.

11. "State Quacks — or the Desperate Condition of the Wither'd Sisters," by William Heath, England. From *The Looking Glass,* 1 March 1830. See BM 16,063.

12. "Uncle Sam Sick With La Grippe," by Edward W. Clay, United States, 1838. See Helfand, *Medicine & Pharmacy,* No. 8.

13. "Uncle Sam in Danger," Anonymous, United States, 1834. See Helfand, *Medicine & Pharmacy,* No. 13.

14. [North and South Treating Uncle Sam,] by F. Morse, United States, 1860. See Helfand, *Medicine & Pharmacy,* No. 82.

15. "Homeopathic Treatment, "Anonymous, United States. From *Yankee Notions,* April 1861. See Helfand, *Medicine & Pharmacy,* No. 19.

16. "General Excise," by William Dent, England, 1788. See Library of Congress Collection, Washington, D.C., No. 2–568.

17. "The Doctor Administering His Gilded Pill," by Charles Williams, England, 29 March 1802. See BM 9849.

18. "Doctor Sangrado Curing John Bull of Repletion — with the Kind Offices of Young Clysterpipe & Little Boney," by James Gillray, England, 2 May 1803. See BM 9986.

19. "Moments of Pain," by Theodore Lane, England, November 1820. See BM 13,988.

20. "The Royal Cot, or the Great Babe Taken Ill," by Isaac Robert Cruikshank, England, circa September 1820. See BM 13,843.

21. "Consultation on the Best Cure for the Gout i-e Multum im [sic] Parvo," Anonymous, England, August 1816. See BM 13,805.

22. "The Doctor," by George Cruikshank, England, January 1820. See BM 13,520.

23. "Phlebotomizing John Bull," by Longshanks, England, 8 March 1830. See BM 16,069.

24. "Radical Quacks Giving a New Constitution to John Bull," by George Cruikshank, England, 4 February 1820. See BM 13,714.

25. "John Bull & His New Doctor," by Thomas Howell Jones, England, April 1829. See BM 15,710.

26. "Dr. Arther & His Man Bob Giving John Bull a Bolus," by William Heath, England, April 1829. See BM 15,714.

27. "A Desperate Case," Anonymous, England, 1802. See Library of Congress Collection, Washington, D.C., No. 3–276.

28. "Extract Const. Amend.," Anonymous, United States. From *Harper's Weekly,* 27 October 1866. See Helfand, *Medicine & Pharmacy,* No. 37.

29. "The Political Invalid," by Henry L. Stevens, United States. From *Vanity Fair,* 16 June 1860. See Helfand, *Medicine & Pharmacy,* No. 11.

30. "John Bull's Patent Medicine," Anonymous, England, 28 August 1813. See BM 12,078.

31. "Bleeding & Warm Water! or, The Allied Doctors Bringing Boney to His Sense's," by George Cruikshank, England, 12 December 1813. See BM 12,118.

32. "A Consultation About the State of Turkey," by John Leech, England. From *Punch,* 1855.

33. "A Pill in Time," by John Tenniel, England. From *Punch,* 21 October 1876.

34. "The Mad-Doctor," by John Tenniel, England. From *Punch,* 8 June 1867.

35. "In a Bad Way," Anonymous, England. From *Fun,* 24 August 1887.

36. "A Case for the Cold Water Cure," by Frank Bellew, United States. From *Harper's Weekly,* 23 June 1864. See Helfand, *Medicine & Pharmacy,* No. 2.

37. "Wonderful Surgical Operation," by Henry L. Stevens, United States. From *Vanity Fair,* 3 November 1860. See Helfand, *Medicine & Pharmacy,* No. 15.

38. "Professor Wise Performing a Surgical Operation in Congress Hall," Anonymous, United States, 1839. See Helfand, *Medicine & Pharmacy,* No. 14.

39. "Bleeding Extraordinary," Anonymous, England, circa 1835.

40. "Animal Magnetism," by John Doyle, England, 14 June 1838.

41. "Animal Magnetism," by Edward W. Clay, United States, 1839. See Helfand, *Medicine & Pharmacy,* No. 71.

42. "The Mountain in Labour — or, Much Ado About Nothing," by Robert Seymour, England, 2 March 1829. See BM 15,677.

43. "Loose Principles," by Thomas Rowlandson, England, 21 January 1789. See BM 7492.

44. "Injecting Blood Royal or Phlebotomy at St. Cloud," Anonymous, England, June 1804. See BM 10,254.

45. "The Treasury Spectre, or the Head of the Nation in a Queer Situation," by Isaac Cruikshank, England, 9 June 1798. See BM 9226.

46. "A Plaister for Pam," by John Leech, England. From *Punch,* 6 March 1858.

47. "The Two Sick Men," by John Leech, England. From *Punch,* 18 August 1860.

48. "Doctor Bismarck," by John Tenniel, England. From *Punch,* 12 August 1882.

49. "Malattia Equivoca/Maladie Equivoque," by Augusto Grossi, Italy. From *Papagallo/Le Perroquet,* 11 June 1882.

50. "Doctor Boney — Bringing the Powers to Pot, or John Bull and His Friends Rather Shy," by Charles Williams, England, March 1808. See BM 10,970.

51. "The Rival Accoucheurs or Who Shall Deliver Europe," by Ansell, England, 1 July 1800. See BM 9544.

52. "The Gladstone Pill," by John Leech, England. From *Punch,* 25 February 1860.

53. "The Mixture as Before," by John Tenniel, England. From *Punch,* 11 June 1887.

54. "The Revival of Trade," Anonymous, England. From *Fun,* 26 November 1879.

55. "Sending for the Old Doctor," by John Leech, England. From *Punch,* 1851.

56. "An Extra Liberal Dose," by Linley Sambourne, England. From *Punch,* 25 July 1885.

57. "'The Crock' — Official," by Poy, England. From *The Daily Mail,* 17 February 1920. See Fred Urquhart, *W.S.C. A Cartoon Biography* (London: Cassell & Company, Ltd., 1955), p. 41.

58. "Dr. Musgrave Prescribing for Britannia, who is in a Deep Consumption," Anonymous, England, 12 August 1769. See BM 4307.

59. "Les Pestiférés de Jaffa," by Baron Antoine Jean Gros, France. The Louvre, Paris, 1804.

60. "Poisoning the Sick at Jaffa," by George Cruikshank, England, 29 November 1814. See BM 12,466.

61. "French Alias Corsican Villainy or the Contrast to English Humanity," by Charles Williams, England, 13 January 1804. See BM 10,224.

62. "Buonaparte Ordering Five Hundred & Eighty of his Wounded Soldiers to be Poisoned at Jaffa," by R. K. Porter, England, 12 August 1803. See BM 10,063.

63. "After Rembrandt's Anatomy Lesson, by Peter Brooks, England, circa 1983.

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Oral History of Francis C. Wood

FRANCIS C. WOOD

The following interview with Francis Clark Wood, M.D., was conducted by Mrs. Elizabeth Moyer in November 1980. The transcript has been edited to improve its accuracy and clarity, but not updated. Dr. Wood is professor emeritus of medicine at the University of Pennsylvania. He has been a Fellow of the College of Physicians of Philadelphia since 1932, and served as its president from 1967 to 1969.

My grandfather was Francis Marion Wood. He was born in Fairton, New Jersey. After he'd been a hardware salesman for a while, he decided to become a minister, so he came to Philadelphia and got a job in a school looking after things while he learned enough to take the examinations at Princeton University. He then went to Princeton in the Class of 1858. Subsequently, he enrolled in the Princeton Seminary, Class of 1861, and after that, he became pastor at a church in Carlisle, Ohio, called the New Jersey Church. There he married Martha [Van Tuye], the daughter of a Dutchman, Michael Van Tuye. He was then asked to go to be the first home missionary to the Dakota Territories before they became states. So he went to Fargo with my father, Clinton, who was his oldest son. My grandfather traveled all over the Dakota Territories starting Presbyterian churches. My father, about the time he was ready for college, said he'd like to go to Princeton University. My grandfather said, "That's a fine idea," but didn't think he had any responsibility for supporting his son at college. So my father went to Princeton, worked his way through college, played football, graduated in the Class of 1892, went to Princeton Seminary, and during seminary coached football at Washington & Jefferson, and, after that, worked in the Water Street mission in New York City, a place that looked after drunks and down-and-outs. Next he got a call to go to South Africa, to the town of Wellington, to teach in a mission institute that was training young men to be missionaries. He accepted the call and arrived in South Africa in 1897.

My mother, who was the daughter of a clergyman, was born in 1874 in Paterson, New Jersey. She was "called" to South Africa to teach in the Huguenot seminary. This was the first women's educational institution in South Africa offering a curriculum going beyond high school. It was founded by an aged preacher named Dr. Andrew Murray. I have her diary; she was 23 years old. She landed in Capetown, South Africa, and went on to Wellington, a small village about 40 miles from Capetown. Then along

Transactions & Studies of the College of Physicians of Philadelphia Ser. 5, Vol. 12, No. 4 (1990); 475-489
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came Thanksgiving and nobody knew what that was; she got a little homesick. Then along came Christmas and that was in the middle of the summer, and she was a little more homesick. In April the only close friend she'd made in the Huguenot seminary, Martha Sylye, came down with tuberculosis and was sent to a sanitarium. My mother was really dispirited and blue; she had kept a diary with an entry every day since she left America. In May she wrote in the diary:

> I went to the home of Dr. Marais to a conference in Worcester, South Africa, and there in the same house, was an American named C. T. Wood, who was also teaching in Wellington.

That's the last entry in her diary for a year and a half. After a while they got engaged and then went on up with the heads of the Huguenot seminary to see some of their students who were teaching in a little mission station called Marija, in Basutoland, which is now called Lesuto; and while they were there they decided to get married — and did — on my father's thirtieth birthday, 15 January 1899.

My older brother C. Tyler Wood, Jr. was born on 18 February 1900. I was born 1 October 1901 and my brother Richard was born in 1906. I can't remember the year, but we [also] had another little brother who died from diphtheria shortly after birth. Eventually my father became ill, and my mother wasn't well, so they came back to America in 1912 and were examined here. My father was found to have a pituitary tumor and my mother was found to have tuberculosis, so they went back to where they had left us in South Africa, sold everything at auction, and came on to America to the town of Wooster, Ohio, where my father had an appointment at Wooster College teaching religion. We went to Wooster Academy; then my brother went to Princeton University in the year of 1917, and I went there in 1918.

After going through Princeton, where I played freshman basketball, varsity soccer, and varsity lacrosse, I came down to the University of Pennsylvania for medical school. I happened to come to the University of Pennsylvania because one of my basketball and lacrosse playing friends from Princeton, James Winfield, had a father who had a practice in Brooklyn, New York — a dermatological practice I believe, at the Kings County Hospital. He said to his son, "The best doctors we get here as interns come from the University of Pennsylvania and I think you ought to go there and learn what they know." So Jim wanted to go there. My family living in Ohio wanted me to go to Johns Hopkins. But I came down here [to Philadelphia] and I talked to Dr. William Pepper, asked him about coming here, and he said, "That's fine, we'd be delighted to have you." After we talked a while he said, "Have you any questions?" I said, "Yes, I want to come here to the University of Pennsylvania Medical School. My family wants me to go to Hopkins; will you give me some arguments to give them as to why I should come here?" Well, he threw back his head and laughed,

and said, "I never heard that one before," but he sat down and he told me some very interesting things. Well, the upshot was that I came to Philadelphia in the fall of 1922, started medical school, and finished in 1926. I interned at the University of Pennsylvania Hospital and then tried to decide what I was going to do [next].

While I was an intern, I thought I was going to be a surgeon, and I practiced tying knots on the bedpost like everybody else. But toward the end of my six months of surgical internship, I began to get a rash on my arms. Scrubbing the way we had to in those days took the tops off the rash and then I dipped my arms in alcohol and it burned severely. So, one day I sat down and tried to calculate, if I lived to be 65 and practiced surgery, how long I would spend washing my hands. Well, it came out to be a year and a half and I decided that would be too painful. So, I started walking up and down the corridors at the University asking people, "who wants an unemployed intern?" The next year three possibilities came up: hematology with Dr. Thomas Fitzhugh; gastroenterology with Dr. T. Grier Miller; and cardiovascular disease with Dr. Charles C. Wolferth. I finally settled on cardiovascular disease, started in there, and worked with Dr. Wolferth from 1928 until I went off to the war in 1942.

Now the question comes up as to how I happened to go into medicine. I've always been interested in what gets people into medicine; and you hear some very amazing stories. But I'm not sure I ever heard one that is quite as irrational as mine. When I was about nine years old in Wellington, South Africa, my father, who preached on Sunday evenings, had a visiting preacher, Dr. Karl Kumm, a famous African explorer, come in and talk about Mohammedanism and the Christian religion. On that particular evening, walking home with Dr. Kumm in the moonlight, he found I had a secret sorrow. My brother and I each had a hen that was supposed to lay eggs; we were to sell the eggs and give the money to the missionaries. My brother's hen had laid an egg a day for three weeks and mine hadn't laid a single one. Dr. Karl Kumm then gave me 2 shillings and 6 pence (which was about a quarter) to give to the missionaries in place of [the money for] my hen's eggs. Well, from that time on, I was going to be a doctor like Dr. Karl Kumm. The family started telling everybody that "Francis is going to be a doctor." When you get that noised around long enough you can't change your mind. Several years after I graduated (somewhere in the early 1930s, I think), I was looking through my father's library, when I saw a book by Dr. Karl Kumm, who had given me the money for the missionaries, and I was interested to find that he was a Ph.D. and not an M.D. at all, so that's the way I got into medicine.

The way I met my wife is also rather interesting. During my medical school time, I played soccer every Saturday in the fall with the Princeton Club soccer team against soccer teams in the various cricket clubs. One day at the end of a soccer game we were in the locker room at the Merion

Cricket Club, and I was saying to one of the men who played goal on the other team, "I've got an invitation to go to a wedding of one of my classmates from Princeton, named Lawrence C. Woods, but I guess I won't make it." "Well," he said, "I have to make it; I'm the preacher." So we both met the girl who was my classmate's sister, Mary [Mollie] Louise Woods, from Sewickley, Pennsylvania. Mary and I gradually became better acquainted and we were married on 4 June 1926, just at the beginning of my internship.

My wife and I have three children. Francis C. Wood, Jr. went to Princeton, then to Harvard Medical School, and now [1980] is out in Seattle, Washington, an associate professor at the University of Washington Medical School. My daughter, Elizabeth Vance Wood, went to Carleton College. Then she went into occupational therapy, and finally, taking two more years of training, she is now physical therapist at the Newton Wellesley Hospital, just outside of Boston. My youngest son, Lawrence C. Wood, went to Princeton, then to medical school in Philadelphia, had his internship here and his residency in medicine in Charlottesville, Virginia. He is now up in Boston in the thyroid field at Massachusetts General Hospital, and he practices medicine up there in addition to specializing in thyroid disease.

Now a little about how I happened to get into the cardiovascular section at the University of Pennsylvania Hospital and what I did there. About the time that I finished my internship, Mr. Edward B. Robinette gave some money to the Department of Medicine at the University of Pennsylvania and the Hospital of the University of Pennsylvania. These funds were given to Dr. Charles C. Wolferth, who was a young heart specialist, to start a cardiovascular section which would look after people with heart disease and study the various diseases of the cardiovascular system. Just about that time, Dr. Wolferth was looking for someone to join him. I came along, and he offered me a job as a Fellow in the Robinette Foundation.

So, I settled into a little room on the third floor of the Maloney Clinic and started to learn something about patients with heart disease. I began taking electrocardiograms and learning how that was done and what they meant. I was not a great investigator, and I'll have to admit that practically all the interesting things that came out of my research came out of Dr. Wolferth's head and mind; so it was his brain and my muscle that did those things.

We got very much interested in angina pectoris, a pain produced in people by exercise, which we now know to be the result of narrowed coronary arteries; but, at that time, there was a very famous heart specialist in England, Sir Clifford Albutt, and a well known cardiovascular man, Carl Wenckebach, in Vienna. Both of these men believed that the coronaries were not the cause of angina. Sir Clifford Albutt said "twixt agitation of patient and attendant, the heart, assumed to be the protagonist in the

conflict, is, in fact, the one passive actor." That argument went on for a while.

One day, Dr. Wolferth had a patient sitting in the electrocardiographic chair who had an electrocardiogram taken, and shortly thereafter, while still in the chair, had an attack of angina. During this attack another electrocardiogram was taken and that electrocardiogram was definitely different from the one before his pain occurred. So Dr. Wolferth brought it and showed it to me and said, "This ought to tell us that there is a myocardial-something going on during an attack of angina pectoris." This led us to studying many patients with angina — before, during, and after their attacks — and we found some of them had definite changes in their electrocardiograms during the attack which were different from the effects of exercise in normal people, so we thought these changes might be due to myocardial ischemia. We decided if that were the case, we ought to be able to go into the dog laboratory, open the dog's chest, expose the heart, put an electrocardiograph on the limbs (as we did in taking limb leads in patients), which was all we did at that time, and clamp a coronary artery; show that it produced a change in the electrocardiogram, take the clamp off, and show that the change disappeared within a few minutes.

We worked and we worked at this, and it didn't turn out too well, until one day I got a little lazy and wanted to get out and go home. I'd always been clamping the big arteries on the front of the heart, the right coronary and the anterior descending coronary, until then; this time I lifted up the heart and clamped the posterior descending artery at the back in addition to the right coronary and the anterior descending (all of them) and suddenly I saw a dramatic change in the electrocardiogram, took the clamps off, and watched it disappear in a minute or two. It became obvious after further experiments that it was the clamp on the posterior descending artery that was producing this change, not the clamps on the other two arteries. Then I became interested in why that particular artery should cause a change and the other two clamps on the other two arteries cause nothing, although in each instance the heart in the area where the blood supply was interfered with got blue and bulged and showed all the signs that it wasn't functioning right. Finally I got the idea that there was something going on in the front of the heart that was not recorded in the limb leads of the electrocardiogram, which were the only leads we took at that time. So I put an electrode right on the front of the heart, clamped the front artery, and got a dramatic change. I went over and told this to Dr. Wolferth.

The next morning he came in and said, "You know, I've been thinking about what you told me. There are a lot of people who have coronary occlusions and we don't get any changes in their electrocardiograms. You can't take an electrode and put it on the front of their heart the way you did in the dog, but maybe we could put it close to the front of the heart

on the chest wall over the heart, and get a change in the limb leads." That very afternoon another patient came in with exactly that situation, and we found out that she had a rather dramatic change in the lead taken from the front to the back of the chest over the heart, and nothing in her limb leads. I showed that to Dr. Wolferth with great enthusiasm, and he said to me, "What does the normal lead taken from the front and back of the chest look like? And I said, "I haven't the slightest idea." So we got all the people in the department and took their electrocardiograms from their chests and that's the way precordial leads were started.

During all this investigation I was also looking after the patients in the cardiac clinic, taking my share of ward duty by running a medical ward at certain times of the year, and lecturing to students. In those days lecturing was a very important part of our work, because in the third year the students had something like eight lectures a day. It was a job that all the people in the department did, and it was rather fun. I enjoyed the teaching, but I found I had to do an awful lot of preparation for it. I remember one time when my younger brother Richard was in the class, I said to him, "I think I'm spending too much time preparing these lectures; it takes me ten hours to do one." He looked at me and said, "Do you know how many people are sitting up there in the amphitheater, one hundred and twenty. Would you rather not spend that ten hours and waste one hundred and twenty hours for the students?" That taught me something. Incidentally, he was my best critic when I started to lecture, and taught me a great deal.

There were other investigations that we got involved in. While I was studying the coronary arteries of dogs one day, the dog's heart slid over to the left, down into the gutter beside the spine; it bulged up, enlarged, and went into ventricular fibrillation and suddenly stopped. I was a little annoyed with that, because it wrecked the whole day, and I had to stop working; but that evening, while I was in bed, I remembered wondering whether that kind of thing ever happened to a patient. [I wondered] whether by changing his position, a patient could roll his heart to the left or the right and do something to its function, so I began to ask patients who had big hearts whether this ever occurred to them, and they said "Yes." I then put them in the various positions and noticed that in some of them they got uncomfortable.

We started to study all the patients in the medical wards in the hospital at night to see exactly what position they were lying in and the nurses recorded their position each hour. Some of those patients who said they couldn't lie in a certain position never took that position at night so we were rather interested in it. We had to write a paper about it, and naturally, you couldn't say, every time you wanted to describe the phenomenon, "He can lie on his left. He can't lie on his back. He can lie on his right," so we had to get a name for it. I asked a patent lawyer what he would call this disease, and he said "Rolling Relief," which is what it was — you rolled

from one position to another in bed and got relief from shortness of breath and discomfort, but you couldn't use that in a scientific paper. So, I went to Dr. Detlev Bronk and asked him what he'd call it in an ancient language and he said he thought he'd call it "Rotopnea." Then I went to Dr. Richard Kern, who was quite a classical scholar, and he said of Rotopnea, "That's a bastard term. Roto is Latin and pnea is Greek; it ought to be "Trepopnea," which is from "Trepo" to twist or turn and "pnea," to breathe, so that's what it became, *Trepopnea*. It is a definite phenomenon. You don't hear very much about it nowadays, but everybody who has it knows he or she has it, and knows he or she has to stay out of a certain position.

After we'd studied [the phenomenon] awhile we finally decided that maybe we would actually watch a patient at night who had this, and was never found on his wrong side. We went down to one patient and asked him if we might turn him on his left side while he was asleep, and he agreed to this. When we did turn him, he suddenly woke up, had to sit up, puffed hard, and then turned around and lay again on his right side. So some of these individuals have a method of avoiding the side that is bad for them even while they're asleep. I tried to study the position the heart took in the chest as a result of [the patient] turning from the right side to the left side, but there was no X-ray machine in the hospital that I could find with which we could do this. I had to build a bench in our orthodiagraph (a radiographic apparatus for recording accurately the form and size of structures inside the body) so I could have a patient climb up on it. Then I turned him on his right side, drew his orthodiagram, turned him on his left side and drew it again. And I found there were some people whose hearts moved remarkably far under these circumstances from one side to the other; but they weren't the ones who had the trepopnea.

We never found out exactly what was causing it. I was quite sure that it must be the kinking of some vessel or other in the media stinum by a change of position which produced pulmonary congestion as a result. One of the most interesting things about it was what happened to the patient's heart when he lay on one side and took a deep breath. I thought the heart would sag down toward the lower side, but actually it did just the opposite. It lifts up toward the midline as the patient takes a deep breath. I had to study anatomy a little and find out that it was the lower side of the pericardium, which is inserted into the neck and into the diaphragm, that was being pulled tight like a hammock while lifting the heart up during misfunction.

After working in the Robinette Foundation in the department of medicine, teaching, seeing patients, and doing some research in the laboratory and in the clinic, along came World War II. The night of Pearl Harbor we already had a skeleton organization for a general hospital in the Army, but the next night we all met. Dr. Isidor Ravdin was the head of this organization, the surgical chief; Dr. Thomas Fitzhugh was the medical chief. Many

of the young men in the University Hospital joined this organization. We eventually got our yellow fever shots, and fortunately for us, the shots we received were free of the hepatitis virus that had contaminated the vaccines given before and after our shots.

We began assembling our nurses and corpsmen and I think it was in March or April of 1942 that we were alerted and sent down on a train to Camp Claiborn, Louisiana. Finally, on 3 January 1943 we were sent across the country to the Los Angeles area. There we boarded a boat, the *Montecello* — an old Italian liner that had been converted to a troop transport. As we left the harbor and sailed out into the Pacific ocean, I heard one of the nurses saying, "Don't look now, but you won't see the cruiser and the destroyer which are going to accompany us across the ocean." Actually there was no ship accompanying us at all. We went sailing all by ourselves straight across the Pacific, zig-zagging all the time. We landed in Fremantle which is down in the lower corner of Australia, and found all the stores sandbagged as though they were expecting trouble. We asked people, "Are you expecting the Japanese to bomb all the way down here?" And they replied, "Oh, no, but tomorrow the Australians are coming home from North Africa." That's exactly what happened. We were herded aboard our boat and the Australians landed and really tore the place apart. They came over in the *Queen Mary,* the *Ile de France*, the *Aquitania*, the *New Amsterdam,* and one other vessel.

Soon we left Fremantle and sailed on to Bombay, India, and went ashore there. It was wonderful to be on land after some 40 or 50 days of crossing the Pacific. We were sent up to a British station called Deolali, north of Bombay, and our nurses went to Poona. Our entire group eventually reassembled several weeks later on a train that went up north across India to Calcutta and then travelled north along the Brahmaputra River. Then we boarded a smaller train which took us up into Assam which is in the northeast corner of India, right next to Burma. There we began to look around to see what the hospital was like. The facility was comprised of a lot of bamboo huts with palm leaf roofs and bamboo floors, and the beds that the patients would be sleeping on. It was quite a sight. We got there right at the beginning of the monsoon season and it was raining like blue blazes. Every roof in that hospital leaked every day it rained during the monsoon period, so every patient, every doctor and nurse — everyone at the hospital — got wet, but it didn't seem to do them any harm. When we landed we had been told that Assam was the most malarious country in the western world, and the British prophesied that we would all be "invalided out" in six months. But only four or five of us ever got invalided out because we were pretty careful to stay under those mosquito nets that we had during the dusk and dawn; those are the times the Anopheles minimus, which is the mosquito which carries the malaria in that area, did most of its flying.

We got everything going. First of all, it became almost entirely a medical hospital, and the surgeons were rather unhappy. We saw malaria, dysentery, all kinds of things. We got to be specialists in malaria. I think we must have seen more than 30,000 patients with malaria during our time there. The dangerous malaria was Falciparum which produced the cerebral types of malaria, which were very dangerous. We also saw a lot of vivax malaria and a little of some of the more uncommon types. During that summer, the Chinese gave us a kind of medicine (Frafine) that they said was very effective in malaria, so we tried it on some patients with vivax malaria in the Chinese part of the hospital; the fevers of these patients promptly broke, their temperatures reaching normal. Next we tried the drug on a few of the Falciparum malaria patients and nothing happened; their fevers persisted, making it necessary for us to administer something else. It was then for the first time we found out that the Chinese were fairly well immune to vivax malaria, and you didn't have to give them anything to bring their fevers down, [their temperatures] dropped spontaneously.

After a year or so we began to see scrub typhus after Allied troops had gone up into Burma. We didn't know what it was, in fact we didn't know what a lot of the diseases we saw were. So we gave them names. For instance, there was a kind of fever that the 1880th engineers came in with which we called 1880th engineer fever. It was a high fever that would spike up and down for about a week; when the fever was high, the patient stayed in bed; when it was down he felt perfectly normal and ran all around. We still don't know what [this fever] is. We had another one called "muleskinner's fever" that attacked the troops who looked after the mules. But then this very serious, severe kind of fever came along and we called it "CBI fever" because of the China, Burma, India theater in which we worked. Later Dr. D. Sergeant Pepper found it in the books and identified it as scrub typhus fever or "Tsutsugamushi." The interesting thing was that a number of years before, it had been described by the Japanese as Japanese river fever or Tsutsugamushi. Yet they had had this same disease in their army in Myitkyina over in Burma. We found the records after we captured that place but the Japanese hadn't known what it was either. They called it a strange form of typhoid. We had a lot of very sick people in the hospital with that disease. It was spread by a small mite. It was called mite typhus as well, as eventually we got some of the Rickettsia from a patient and got it over to Washington.

After some time, when Allied troops started over into the Myitkyina area, there was some fighting and the surgeons had a chance to go to work. In the meantime they had been working in our medical wards, a lot of them, because the hospital was absolutely chock full. For instance, we had a 1,000-bed hospital, and when we had 2,500 patients in it, they gave us one more medical administrative officer, so we were working pretty hard during the first summer. When Allied troops had captured Myitkyina, they

had been through the jungle. They had been very, very sick, they were all out on their feet, and all were flown back to our hospital from the Myitkyina airstrip, whereupon the Japanese counterattacked Myitkyina and Dr. Ravdin got a message from headquarters to send every man who could walk back to duty immediately. Dr. Ravdin went around to see all these soldiers and they were just absolutely in terrible shape and he sent a statement back up to headquarters, "I refuse."

A few days later he got a message from General Stilwell up in Burma, to come up and see him, and he said goodbye to all of us thinking he was going to be discharged dishonorably from the Army. But when he got up there, Stilwell said to him, "General, you saved my life." Ravdin asked what had happened and Stilwell replied, "When they gave you that order to send all these sick men back to duty, some little Napoleon up at my headquarters wanted to get me into trouble, and you saved my life. Now what can I do for you?" Whereupon Ravdin said, "General Stilwell, we've got some very sick patients with scrub typhus in our hospital and we can't keep them cool in the monsoon weather, we need air conditioning." Stilwell asked, "Why don't you requisition it?" Ravdin said, "I've done that every week for the past four months." So, Stilwell took a piece of paper out of his pocket and wrote a radio message to Dan Sultan, his second in command in Delhi, saying, "Stilwell to Sultan, Ravdin needs air conditioning. You know and I know where those units are. Have 50 percent on a plane within 24 hours, the rest to follow within one week." Well, the units were all in the high ranking officers' quarters in Delhi, and they were taken out and sent to our hospital, whereupon we understand that the high ranking officers all called on each other the next day to make sure they'd lost theirs too. But the units came on up and we set up an air conditioned ward in a bamboo hut in the middle of the monsoon which was a real improvement on [the facilities] we had had.

Once the new air conditioned ward had been in operation for some time and the fall came along, Lord Louis Mountbatten, who was Supreme Commander in Southeast Asia, let us know that he wanted to dedicate that ward as it was the only air conditioned ward that had ever been set up in Assam. Whereupon we got all set — we got all the electricity and the lights and everything in there ready for him. There were no scrub typhus patients in the hospital at that time but we got all the patients out of the venereal wards and put them in the beds [in the air conditioned ward] and told them what they had, namely, scrub typhus. Mountbatten was to come [in the] afternoon and he didn't come and didn't come. Finally, at about ten o'clock, we decided to send everybody back to bed, which we did. But about midnight, a plane buzzed our hospital and the electric lights were put back, the venereal patients were put into the beds, and Lord Louis walked into this ward. He was a wonderful looking man, as dignified as you can imagine, and he said, "I hereby dedicate the first air conditioned ward in

India." Then he walked down and saw one of these patients in a bed and started speaking to him. Whereupon the patient jumped out of bed and stood at attention, and [Mountbatten] immediately put him right back and said, "You're too sick, and where did you get your scrub typhus?" And this sergeant said, "Near the Myitkyina area, sir." Mountbatten continued, "And how long have you been sick?" "Oh, quite a little while, sir," replied the soldier. And the next day Ravdin got this patient into his office and said, "I'm going to court martial you for lying to the Supreme Commander." Whereupon a twinkle came into Ravdin's eye and a smile grew on the soldier's face, and he said, "General, I saw you were in a tight spot and so I tried to help out."

When I came back from the war I decided that all my research had stopped and I was going to go out and practice medicine at Bryn Mawr and that was that. About that time Dr. Oliver Hazard Perry Pepper, who had been professor of medicine and chairman of the department of medicine at the University of Pennsylvania, decided to resign and they started looking around for a successor. I don't know how it all happened, but eventually they came to talk to me and all I could say was, "How do you know that I can do it?" They said, "We don't know, but we'd like you to try." Each year for the first four years I resigned because I didn't like the job, and Dr. Mitchell, then the Dean, would come to me and say, "Now, Fran, everything is quiet, don't mess it up just wait a little while." After the first four years I got my team there and then it began to be fun, and I stopped resigning and stayed on for 17 years. The real fun of it was teaching and working with the house staff and with the group of residents that we had year after year after year. I feel they're really all my children — scattered all over the country — and they were a great joy to Mollie and me.

While I was professor of medicine, I was asked to be on the research committee of the American Heart Association, which had just come into its first large amount of money to support fellowships and research. That was a very interesting job because some of the great cardiovascular people in the country met once every year, maybe sometimes twice a year, to discuss all these problems. Actually what was developed there by the American Heart Association research committee was to some extent followed by the government after they began to support research and fellowships.

The next thing that happened to me that was extracurricular and which I enjoyed was to be a member of the trustees of Brookhaven National Laboratories, the atomic research lab out on Long Island, New York. This laboratory had as its trustees two men from each of nine universities in the East, and we met quite frequently, to be briefed on what was going on there. It was a real education in the field of atomic physics.

The next extracurricular activity I had, which was rather educational too, was being on the board of directors of the Equitable Life Assurance Association of New York. At first I wasn't going to do it. Bob Loeb, whom

I succeeded on the board, called me up and said, "I just want you to know that I was the one that suggested that you be on the board after me. Don't turn it down because it's one of the most educational things I ever had happen to me." So I accepted and went, and it was [educational]. To see a group of really remarkable, fine, leading businessmen in America sit down and think carefully about a lot of problems every month throughout the year was a most interesting experience. In fact, I bought the *Wall Street Journal* going over to the train every time just to become a great businessman in 15 or 20 minutes.

I also had some rather interesting times first with the American Clinical and Climatological Association, which I joined back in the 1930s or 1940s. I was president in 1956. Then I was on the Council of the Association of American Physicians for quite a long time, first as treasurer, and later as president.

The most wonderful time I had started as I was finishing my professorship of medicine and retiring from the chairmanship of the department of medicine at the University of Pennsylvania. I was elected first vice-president and then president of the College of Physicians of Philadelphia. That was in 1967. Because I had just finished my administrative job at the university I had time to come down and really find out all about this marvelous old college with all its history and all the rest of it. I did a bit of studying about [the College] and at that time it was a rather interesting organization. Olga Lang was the secretary of the college and she really was the major domo for she ran the whole show. She kept all the finances, everything, I think some of it in a sock or shoe. It wasn't a great business arrangement but it worked very well.

About that time the National Library of Medicine decided that there were going to be a group of regional libraries all throughout the country, and we went down to Washington to talk to them about taking on that responsibility [in Philadelphia]. If we were going to do anything like that there were going to be government finances involved, so we had to have somebody who kept our books in a way that the government would appreciate, which was not the way they were being done at the time. First I got Dr. W. Wallace Dyer to be the executive director of the college, and he took over with a gentle hand and ran the show in a beautiful way, a way just exactly that I had hoped he would, and from there we went on. He died after a few years and then we had Dr. John Kapp Clark for some time doing it. Ever since then we've had a much more expensive administration, but it has been necessary, particularly because the relationship with the National Library of Medicine made us one of their regional libraries.

During my presidency [1967–1969] we decided that we had to find out what this college and this library ought to be thinking about for the future. We assembled what was known as the Berry Committee to help us in this mission. George P. Berry, Dean of the Harvard Medical School, the

librarian at the Harvard Medical Library, and librarians from all over the country came as a committee to study what we should be doing. It was a most helpful experience for us all and one of the things that George Berry put in his final report read as follows: "with your library and your historical collection, you ought to have an institute for medical history at the college."

Nothing happened until John Hubbard became president [1974–1978], and he really was able to get almost anything moving that he thought was worth getting moving. He and Jonathan Rhoads and I approached one of my patients and asked him if he would like to give us a million dollars to start this institute and to name it in honor of his father. He sat there and looked at us and said, "No, I'll give you $500,000 in matching funds. I don't want it named for my father, I want it named for my doctor, Dr. Francis C. Wood, and that is that." Of course, that put me in on the spot, but I wasn't going to lose that $500,000 just because I was a little bit sensitive about the situation so we let it sit. And John Hubbard got this thing going from that point on. It is now, I think, a really well-started concern. I think it's going to get stronger and bigger and better all the time and the thing I love most about it is that 150 years from now when some of my descendants find there is a Francis C. Wood Institute for the History of Medicine, they will think that I was a medical historian, which makes me chuckle greatly.

Another very interesting part of my experience in Philadelphia was being elected to the Philadelphia County Medical Society board of directors, on which I served for quite a number of years. It was certainly an eye-opener, to know the important things that go on in that society, and the important part they play in medicine in this city, in this community, and in this country.

One of the great people in my life who was [another] patron saint was Mr. C. Mahlon Kline of Smith, Kline, and French. I happened to get acquainted with him because he was the patient of Dr. Kendell Elsom, and one day he said to Dr. Elsom: "You know pharmacology has gotten a good deal from the University of Pennsylvania Medical School, and I'd like to give some money to the Medical School of the University of Pennsylvania to demonstrate my gratitude for what they've done for pharmacology and pharmacy." So Kendell Elsom had him go and see Dr. Alfred Newton Richards, and Mr. Kline said that he would like to give $25,000 to the University. And Dr. Richards said, "That's fine, we have a new professor of medicine coming in (which happened to be me). He'll need the money." Whereupon Mr. Kline replied, "There's just one trouble with you universities and institutions, when a man starts giving you some money you expect him to continue it every year, don't you? How long do you expect me to continue this?" And Dr. Richards said, "Mr. Kline, just as long as it is to your advantage taxwise," and from that moment they were bosom friends. This was the first really honest answer he'd had to that question.

What happened next was that I went to Dr. Richards and asked, being a pretty green character at the moment, "What does a new professor of medicine do with $25,000?" Richards said, "Well, I'll give you these suggestions. One, don't hoard it, and two, do something you think is really worth while." So I supported one of Dr. Richards' men who started our renal clinic over at the University Hospital, Dr. John Kapp Clark. Kapp was Mr. Kline's first Fellow. As time went on, I had Dr. Richards, Dr. Elsom, and Mr. Kline and my group of residents out twice a year to have a visit at my home. They'd take him [Kline] up to their laboratories and then we'd take him [Kline] home to dinner and he got to thinking of them as his "colts." He had a lot of good horses, as you probably know, and each year he'd call me up around Christmas time and say, "Fran, you know my lawyer tells me I've got too much money; do you know anybody who might help me with this?" And I'd say, "Mr. Kline, I'll see if I can find such a person," and then we'd hang up and a little while later $50,000 would come in for Christmas.

He gradually increased the amount of money he put behind our department of medicine because he just liked those young men and what they were doing, and he liked supporting them. Then one day, he came to me and said, "You know, I'd really like to do something on a more permanent basis, really give you something that will keep you going indefinitely." I didn't know what to ask him for, so I asked Dr. Richards, and he and I concocted the following — to the department of medicine $100,000 a year for 10 years; to the department of research medicine $30,000 a year for 10 years, and that [agreement] was signed, sealed and delivered in about two weeks.

Periodically, he would come to me and say, "Fran, do you know anybody who could help keep me from giving too much money to Yale?" They [Yale] were after him all the time, but I was never quite able to handle that one, and eventually he built a tremendous building up at Yale. I suppose we could have requested and gotten the building down here. But it is an important thing that he did this, so I feel that we got more than our share and I didn't mind Yale getting more than theirs. In addition, Mr. Kline, through Kendell Elsom, gave us quite a large sum, I don't remember the exact amount, for the College of Physicians and there was the C. Mahlon Kline Fund here [at the College]. And finally in his will, Mr. Kline left something like $2,000,000 to the University of Pennsylvania to be spent "according to the suggestions of Dr. Francis C. Wood," which is still there.

I'd like to say a little more about my other patron saint. Dr. Alfred Newton Richards, who was the man who made early studies in the way the kidney functions, was vice president of medical affairs when I became chairman of the department of medicine. He guided me, and directed me, and helped me, and let me talk to him about every problem that came up.

In fact, once a year I'd go to his home with about six pages full of all the things that had happened that year and tell him about them. He would then question me and ask me about things, but he was constantly helping me to make important decisions. I drove him to town every day for the first four years of my chairmanship, just to talk to him about the problems of the medical school and of the department of medicine. There was nobody who helped me more than he did.

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Recollections of Charles H. Frazier

PENDLETON TOMPKINS

My internship at the Hospital of the University of Pennsylvania began on 1 July 1931. It was a two-year rotating internship with two months' service in one of the specialties (ophthalmology, gynecology, dermatology, etc.) the first year, and six months each in medicine and surgery the second year. This rotation system was obviously a preparation for either general practice or a specialty. One of my two-month assignments was neurosurgery with a fellow intern, Theodore Erickson, who subsequently became professor of neurosurgery at Wisconsin. Our chief was Charles H. Frazier, chief of staff of the hospital, professor of neurosurgery, and president of the Neurosurgical Society. Frazier was also a friend and competitor of Harvard's Harvey Cushing and McGill's Wilder Penfield. He was world renowned for his work with William G. Spiller (professor of neurology) on tic douloureux (spasmodic irritation of the fifth cranial nerve, producing excruciating episodic pain) and its surgical cure.

Although he was a medical giant, Frazier (we interns referred to him affectionately as Pop Frazier) was a smallish man with sparkling white hair and eyes as bright as a summer sky. On my first day with him he said, "Tompkins, you don't know anything. Do as you are told and don't make an original move without permission. Today you will stand beside me at the operating table and with an asepto syringe squirt normal saline solution on the brain so that it is always wet."

In those days a craniotomy (surgical opening of the cranium) took six hours or more. We interns did not get any lunch, but Pop had a flask of milk-shake attached to his belt and a rubber tube leading under his mask to his mouth so he got nourishment. After surgery we made rounds and then "Erick" and I would work up the new patients. There was no recovery room in the modern sense, but the post-operative patient was put in a room with two beds and a chair for the nurse. One of us interns slept in the second bed, so

Transactions & Studies of the College of Physicians of Philadelphia Ser. 5, Vol. 12, No. 4 (1990); 491-497
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that we would always be with the patient. In my first two weeks we operated on 14 patients and 13 of them died before breakfast the next morning. Erick and I thought we averaged four hours of sleep a night.

At four o'clock each Friday afternoon a neurosurgical staff meeting was held in the Chief's office to review the week's work. His office was like a gentleman's drawing room, with a lovely antique silver service presided over by his secretary, delicate china, delicious pastries, and easy chairs for the higher-ups. The setting was suitable for the "life of Riley." Pop followed the army method, asking the opinion of the lowest ranks first so that no one would be embarrassed by contradicting a higher officer. Of course a first-year intern was the very lowest. One day when we commenced a craniotomy the burr slipped out of the electric hand drill and shot into the patient's head. He died quickly. Pop said, "We'll start today with the case of Mr. X, who died on the operating table. Tompkins, what was the cause of death?" I said, "Doctor Frazier, the drill slipped out of the chuck and was fired into the patient's brain and killed him." Absolute silence in the room, not a spoon clicked a teacup, scones stopped on the way to the mouth, everything froze. After a long pause Pop said, "Harris, what killed him?" Harris was the junior resident. Pop advanced up the hierarchy through the assistant resident to the resident, the instructors, the assistant professors, the associate professor, and even the head nurse in the operating room.

There were all sorts of explanations — too much saline, dehydration, chemical imbalance, coincidental apoplexy, anesthetic reaction. The Lord knows what. When everyone had had his say, Pop looked us all over and exclaimed, "My God! My life has been in vain. The only man, the ONLY man on my entire staff to whom I have given the best years of my life, the only man with guts to tell me the obvious truth is our junior intern. Of course the death was due to the fact that when the Jacobs chuck was tightened a key was not used so when the burr touched the bone the flutes on the burr acted like the threads on a screw and drew the burr out of the chuck and it flew into the brain. Every one in this room knows that. Why couldn't you say it? Oh my God!"

Squirting saline on the exposed brain hour after hour is pretty boring. We had "lap sponges" which were inch-thick pads of gauze about the size of a washcloth. One day a sponge slipped to the floor and I stepped on it. We wore thin soled tennis shoes and I amused

myself by rocking on the wet sponge pressing the fluid out. The Old Man got more and more restless and his elbows began to jerk. This was a bad sign, because he could give it to you in the ribs pretty good, so I moved away a bit but kept my foot on the sponge. Then suddenly Pop threw down his instruments and said, "My God! Who's stepping on my foot?" It was the best moment of my week.

Interns consider themselves so much above senior medical students that students delight in seeing interns put in their place. One day when things were not going well Pop gave everyone the elbow and finally tossed his instruments on the table and threw up his hands in appeal. "My God! Three assistants and no help. No help at all. None." The students in the gallery could not have been more satisfied.

One day after surgery I was slow getting to the dressing room and Pop was there before me mopping the floor with a regular mop and using a squeeze bucket. Our chief of staff said he liked a clean floor. Then he turned to me. "What are you doing tonight, Tompkins?" I thought, "You know damned well what I'm doing, I'm taking a history and doing a physical and the lab work on those two brain tumor patients and that tic patient you had admitted this afternoon." But I said, "Just the usual, Dr. Frazier." He poked two tickets at me. "Could you use these?" They were tickets to a wonderful musical which was in Philadelphia for a week before opening in New York. I said, "Thank you, SIR," and with feeling. I got the prettiest nurse I could find and we had a glorious evening, back up to the hospital just before midnight. Next day when making rounds Pop said, "Whose patient is this?" I said, "Mine, sir." "What's the matter with him?" I said, "I haven't worked him up yet, sir." "You haven't? What were you doing last night? Goofing off?" It's impossible not to love a man like that, the one and only Pop Frazier.

Besides neurosurgery, Pop did thyroidectomies (surgical removal of the thyroid gland). As I said, he used to elbow his assistants away from the field and one day he elbowed Herman Lichte so far away that Lichte could not see the neck at all. Pop said, "Cut." Lichte said, "I can't see the suture to cut it." Pop said, "Cut anyway." Lichte plunged his scissors down and cut part of the carotid artery. The blood spurted in Pop's face. He did not say a word, just put two Kelly clamps on, repaired the artery, and went on with the thyroidectomy. He knew who was at fault.

We made rounds as a squad following the Professor. I only heard him mention fees once. There was in Philadelphia the Pilling Instrument Company, which manufactured most of our surgical instruments; and very good they were. Mr Pilling's daughter developed a meningioma, which is one of the brain tumors (actually intracranial tumors) curable by excision. Pop removed the meningioma with perfect results. A few weeks later he was humming to himself in the dressing room saying, "Yes, over the years I suppose I've bought $50,000 worth of instruments from George Pilling but now, thank God, I've got it all back. All back." Doctors did enormous amounts of free work in those days, but when no one was hurt, they charged staggering fees (see Appendix).

I have mentioned William G. Spiller who, with Pop, worked out the neuropathology and surgical treatment of tic douloureux. When I first went into Pop's operating room there was a board with changeable numerals which read seven hundred and ninety-two. This meant that Pop had operated on 792 tic patients. Spiller was extremely careful to avoid court appearances, to which he was especially subject because of his international eminence. But he was caught on one occasion and was obliged to give an opinion. The lawyer said, "Now, Dr. Spiller, please tell the court in what textbook you read that material." Dr. Spiller pulled his glasses down on his nose and looked at the lawyer for a full minute before saying, "Young man, I don't read books, [very slowly now] I . . . write . . . them." Such was his fame that there was no more to be said. One of the stories was that Mrs. Spiller told Dr. Spiller to take the children to Rittenhouse Square to play on the brass Billy Goat there. On the way they walked past his office, and he said he'd slip in for a moment. He put some new slides of a retinoblastoma under his scope and began studying them with fascination. It began to get dark, so he went outside and there were his children, playing on the steps since lunchtime.

During my tour of duty, the associate professor of neurosurgery was Francis "Chubby" Grant. One day I was assisting him, or so I thought, when he suddenly told me to do a spinal tap. I had never heard of such a thing during a craniotomy, and only later realized that Chubby simply wanted to get me out of his way. So I crawled down under the operating table among hoses and tubes and a catheter in a bottle and wet sponges, and looked up to find that the operating table was made of two slabs of glass, about a foot wide and an inch thick, sloped toward each other to make a

shallow trough with an inch space between the two sides. I put my forefinger through this space and could feel the knobs of the patient's spinal column. I did not know how high or low I was, and had no hope of getting spinal fluid, even with a very long needle. But I sponged off the area with alcohol and plunged the needle upward. To my absolute amazement and delight spinal fluid began to run out, so I collected it in a beaker. After a while Chubby called down, rather gleefully I thought, "Have you got any spinal fluid yet?" "Yes sir, about 40 cc." Chubby screamed, "Oh my God! Put it back." He could not believe it. Taking out so much fluid might have let the medulla drop down in the foramen magnum with disastrous results. I was very pleased, not to have done the impossible, but to have discomfited Chubby whom I liked very much. That'll teach him, I thought.

Erick and I had our hardest internship on neurosurgery. Pop had insomnia, and when he could not sleep he would phone at two or three in the morning to tell us to get that patient with the cerebellar tumor ready for operation in one hour. So we would operate until breakfast and then start the schedule planned for the day. Only young men could stand the pace, and perhaps only for the assigned two months. Toward the end of our duty Erick and I composed a two-page letter to the Chief. The burden of it was that if the interns had more sleep and rest they could take better care of the patients. We suggested that we be relieved of lab work (urinalysis, CBC, and differential on every new patient), that we have dictating machines (Edison dictaphones with the black wax cylinders which were shaved and re-used) for recording histories and physical exams, and that three interns be assigned to the service so that we could sleep two nights out of three, instead of one out of two. We made other, we thought, sensible suggestions. On my last Sunday on his service I was making rounds alone with Dr. Frazier. He wore a cutaway with a white carnation, a gray waistcoat, a pearl stickpin, striped pants, gray spats, glistening black shoes and, with his white hair, was the epitome of elegance. I walked at his left, half a pace behind. He said, "I got your letter, Tompkins." (At the very last Erick had refused to sign it.) "Very good letter. Excellent suggestions." I said, "Thank you Dr. Frazier." He said, "I'm not going to do anything about it." For some curious reason that made me like him more than ever, perhaps because he was true to form, ornery and honest.

All of us loved Pop. He developed cancer with metastases, but long ago had accepted an invitation to a neurological debate in New

York. Chubby Grant and the staff got him to 30th Street Station in an ambulance, into a Pullman bed, and from Pennsylvania Station in New York to the auditorium. From his wheel chair, Dr. Frazier presented a forceful and uncompromising exposition of his views. Everyone in the amphitheater knew that he was dying, and when he reached his conclusion the entire audience rose and cheered him to the rafters, perhaps not for his views but for his indomitable intellect and his tenacious grasp on the tail of life.

A very great man, an unforgettable teacher, an example in his life of the best that a medical man can be.

Appendix

Fifty thousand dollars is a figure without meaning unless one knows what it will buy. About 1915, my father bought his first car, a Model T Ford with a bright brass radiator. It cost four hundred and ten dollars. That was a tenth of his annual income, or about the same as a doctor's car costs today. I graduated from boarding school in 1924; room, board, laundry, and tuition cost $410 a year. In 1927 I was graduated from Washington & Lee University; my tuition was $75 per semester (half-year). For two years beginning in 1931 I was an intern and received room, board, laundry, and white uniforms, but no money. As an intern, my father sent me $5 a month which sufficed for haircuts (25 cents), cigarettes (20 cents a pack), and condoms, which were three for 50 cents and came in a circular aluminum box embossed on the periphery of the top, "Agnes, Mabel & Becky," and on the bottom "Three Merry Widows." An evening out for the movies cost 50 cents: 5 cents street car fare each way, 25 cents for the movie, 10 cents for a hamburger, and 5 cents for coffee on the way home. After two years I became a resident with a stipend from the professor of $50 a month.

After my year as a gynecology resident, I became a gynecology fellow and lived outside the hospital. My salary was $125 a month, which allowed me to have a car. Gasoline was less than 20 cents a gallon. Each evening I had a five-course dinner for 55 cents, and once a week filet mignon for 85 cents. I wrote a couple of papers which were published in the *American Journal of Obstetrics & Gynecology,* and was entirely satisfied with my life and progress. In 1936 I commenced private practice. Obstetrical care, that is antepartum, delivery, and postpartum care cost $75 and private rooms were $6 a day, no charge for the nursery. Patients were flat

in bed for three days, raised in bed after that, out of bed, very tottery, on the tenth day, and home on the fourteenth day. First office visits were $10, and subsequent visits five dollars. My malpractice insurance was $16 a year, and I still have the policy to prove it. So one bought malpractice insurance for about three office visits. That would equal about $10,000 a visit today.

So, in 1931 when Dr. Frazier said he had purchased $50,000 worth of surgical instruments, that was, indeed, a huge amount.

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Reviews

KENNETH J. CARPENTER. *The History of Scurvy & Vitamin C.* Cambridge: Cambridge University Press, 1986. 288 pp. Price $42.50 hardback edition. Price $12.95 paperback edition.

Reviewed by ELEANORA C. GORDON

In 1593 Richard Hawkins saw half of his crew laid low by scurvy on a voyage from England to the coast of Chile. Hawkins wrote about the disease with considerable feeling in his recollections of the exploration.

> And I wish that some learned man would write of it, for it is the plague of the Sea and the spoyle of Mariners; doubtlesse, it would be a Worke worthy of a worthy man, and most beneficiall for our Countrie, for in twentie yeeres (since I have used the Sea) I dare take upon me, to give account of ten thousand men consumed with this disease.[1]

In the years that followed, many learned scholars did indeed write about scurvy and its depredations. Kenneth Carpenter, professor of nutrition at the University of California, the most recent such scholar, has produced a fine account of their efforts to solve the mystery of the disease.

Carpenter narrates the history of scurvy as it unfolded, without the benefit of hindsight, until the last chapter. The reader, therefore, shares the bewilderment of those who investigated scurvy as they tried to find the cause. What seemed so simple to us now was confusing and contradictory to those working in the field, until laboratory investigations in the early twentieth century tied symptom and sign to a deficiency of ascorbic acid (vitamin C).

The narrative begins with descriptions of outbreaks of scurvy on early explorations, starting with Vasco Da Gama's first journey to India in 1497. Da Gama's men received relief from oranges, lemons, and fresh fruits. Richard Hawkins enthusiastically praised

1. Richard Hawkins, "The Observations of Sir Richard Hawkins, Knight, in his Voyage into the South Sea," in Samuel Purchas, ed., *Hakluytus Posthumus or Purchas His Pilgrims*, Vol. 17 (Glasgow, Scotland: James MacLehose, 1906), pp. 76–77.

Transactions & Studies of the College of Physicians of Philadelphia Ser. 5, Vol. 12, No. 4 (1990): 499-502
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the "great and unknowne vertue" to be found in lemons and oranges. Sir Francis Drake and John Davis knew about the restorative properties of scurvy grass and herbs. Indians showed Jacques Cartier how to cure scurvy with an infusion of spruce boughs. In 1601 Captain James Lancaster of the East India Company prevented scurvy in his crew by dosing them with three spoonfuls of bottled lemon juice daily.

By the early seventeenth century, then, successful empiric remedies were well known to mariners. In his preface, Carpenter states that he wishes to show "the historical development of a scientific approach to a practical problem." The irony of the history of scurvy is that the scientific approach took over four hundred years to validate the specific benefit of the antiscorbutics known to Renaissance mariners. The reader inevitably wants to know why it took so long. Although Carpenter does discuss the medical establishment's views about the general nature of disease and the rejection of empiricism in favor of a philosophical approach, one wishes he had addressed this problem in more detail. Why did such theories as those of putrefaction, protein deficiency, potassium deficiency, contagious miasm, insufficient alkalinity, and ptomaine poisoning receive such serious consideration? Hints are given throughout the work, but there are no efforts to discuss the problem in the detail it deserves.

The reader with a superficial knowledge of scurvy will learn much from the discussion of James Lind's classic experiment in which he cured scurvy in British seamen by the use of oranges and lemons, and of his book *A Treatise of the Scurvy,* published in 1753. Lind's experiment demonstrated that sulfuric acid, contrary to then current medical opinion, did not cure scurvy, and that a combination of oranges and lemons did. Lind believed, however, that scurvy developed from putrefaction brought on by "insensible perspiration" and impure air in a cold damp climate. Oranges, lemons, and green vegetables were beneficial because they were acid and had in addition a "saponaceous, attenuating, and resolving virtue" which helped convert chyle into "true blood." The blood then could be excreted through blocked pores in the skin, thereby relieving the putrefaction. At no time did he believe the condition was a straightforward dietary deficiency. It remained for Sir Gilbert Blane, physician to the fleet and distinguished practitioner, to push through an order mandating the daily issue of lemon juice to the

Royal Navy in 1795. In this situation, Sir Gilbert favored empiricism over philosophy.

Other chapters describe scurvy during various wars, its appearance in Europe during the potato blight of 1845–1848, and, of course, in Arctic and Antarctic exploration. There is a fascinating description of scurvy in California during the Gold Rush, an episode often overlooked in accounts of the disease. The discussion of infantile scurvy, or Barlow's disease, describes a therapeutic dilemma for practitioners and health policy makers. Many babies on pasteurized milk developed scurvy whereas those on raw milk did not. Physicians hypothesized that pasteurized milk contained by-products, resulting from the sterilization process, that caused "autointoxication," which in turn produced constipation and eventually scurvy. Ingestion of raw milk, however, carried a far greater risk of severe gastrointestinal disorders. Knowledgeable pediatricians solved the problem empirically by recommending pasteurized milk supplemented by orange juice and other appropriate fresh foods.

The final section of the narrative is a clear and detailed presentation of the discovery of vitamin C. The chance experimental use of guinea pigs, which, unlike rats, do not synthesize ascorbic acid, by Holst and Frölich in 1907 at last set off a methodical, scientific, and successful quest for the isolation, identification, and synthesis of the antiscorbutic substance, vitamin C, eventually named ascorbic acid.

Carpenter's style is clear and eminently readable. Because he treats scurvy as a problem rather than a disease, however, he remains detached from its clinical aspects. Both historians and clinicians would benefit from more use of primary sources. Quotations from explorers' narratives would have underscored the misery of the disease and the wretchedness experienced by its victims. The 23 black and white illustrations embellish rather than illuminate the text. The caption of the illustration on page 136, "Woodcut of early Dutch explorers trapping and killing polar bears to obtain fresh meat and so ward off scurvy during a winter in the Arctic," is misleading. The illustration is a modified copy of an engraving from Gerrit de Veer's narrative of the third journey of William Barents in 1596, published in 1598.[2] It shows traps surrounding the wooden

2. Gerrit de Veer, "The Third Voyage Northward to the Kingdomes of Cathaia and China in Anno 1596," in Koolemans Beynen and Charles J. Beke, eds., *The Three Voyages of William Barents to the Arctic Regions*, 2nd ed. (London: Hakluyt Society, 1876), facing p. 154.

house built by men led by Jakob van Heemskerck and William Barents on Novaya Zemlya. The crew is skinning one polar bear and firing at another. The traps were used to catch Arctic foxes, not bears. The men did bag two bears fairly late in their sojourn, but there was no deliberate attempt to ward off scurvy. The caption written by de Veer reads, "How we shot a bear, wherefrom we got a good hundred pounds' weight of grease." The men did develop scurvy, but the only cure they sought out was scurvy grass on their way home.

References to *The History of Scurvy & Vitamin C* appear in most discussions of scurvy written since 1986. Carpenter, a "worthy and learned man," has fulfilled Hawkins' wish, for he has written the definitive book on the subject.

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RANDALL M. PACKARD. *White Plague, Black Labor: Tuberculosis and the Political Economy of Health and Disease in South Africa.* Berkeley: University of California Press, 1989. 389 pp. Price $15.95

Reviewed by BARBARA BATES

Medical research has clearly documented some of the factors that lead to tuberculosis. Prolonged exposure to a person whose sputum contains tubercle bacilli is usually the source of infection, and both human crowding and poorly ventilated environments multiply this risk for groups of people. Under most circumstances, however, infection does not lead to disease. The chances of developing tuberculosis after becoming infected are greatest during the first few years of life, adolescence, and old age. Recency of infection, high doses of bacilli, exposure to silica dust, and severe malnutrition also increase the risk of disease. Hereditary predisposition, which is frequently postulated and supported by some data, cannot usually be assessed.

Twentieth-century observers have correlated high tuberculosis death rates with socioeconomic conditions that increased one or more of these factors: industrialization, urbanization, crowding, bad working environments, poverty, famine, and war. In *White Plague, Black Labor,* Randall M. Packard goes a step further; he relates the very high rates of tuberculosis among blacks in South Africa not just to these impersonal factors, but to the specific economic and social policies that he sees as their real cause.

Packard focuses on three locales: the rural, traditionally black regions; the mines, where gold was discovered in the late nineteenth century; and the cities, where industries were multiplying, especially during and after World War I. Both mining and industry needed low-cost labor, and large numbers of blacks migrated there for work. In both settings, blacks were paid poorly, housing was scarce and poor in quality, crowding became severe, malnutrition was common, and working conditions (especially in the mines) were dreadful. Tuberculosis death rates were very high. In 1905, for example, Johannesburg reported that roughly 4.8 per 1,000 black people died of the disease, while the rate for whites was about 1.2 per 1,000. In the mines, tuberculosis took its toll among workers, whose pre-employment screening had been cursory, and between 1910 and 1912 from 0.6 to 1.8 percent of them were sent back to their homelands because of the disease.

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This policy of repatriating sick workers and the frequent turnover of the labor force, Packard asserts, helped to spread tuberculosis into the rural areas where conditions were ripe for it. Drought, an epidemic of cattle plague, scarcity of food, and a growing dietary dependency on maize all reduced the health of the people and increased their migration to cities. Migrants took tuberculosis with them into urban areas, where again conditions encouraged the spread of infection. A key problem here was lack of housing. The national government, aware of industry's need for labor, was not willing to control the urban influx, but neither industry nor municipal governments were willing to pay for adequate living arrangements. Legislation did, however, provide for slum clearance, exclusion of blacks from specified areas, and racially segregated housing for blacks that was farther from their work and unacceptable in additional ways. By segregating blacks from whites, Packard argues, the government removed the tuberculosis problem from the view of whites. Little or nothing was done to ameliorate the basic causes of the disease.

While tuberculosis in the cities remained unabated or became worse in the 1920s and 1930s, tuberculosis morbidity in the gold mines dropped between 1913 and 1938. Mining officials, claiming credit, cited improvements in food, housing, working conditions, and medical services. Packard acknowledges these efforts but proposes two other reasons for much of the change in morbidity; both were exclusionary. In 1913, migrants from tropical areas were banned from the mines because of their unusually high tuberculosis rates, and during the depression of 1928–1933 an excess of potential workers enabled the mining companies to hire only the healthiest. Neither of these efforts proved lasting. In the late 1930s, when labor became scarce again, less fit workers, including some from the tropics, were employed and tuberculosis rose again.

The post-war period, 1948–1980, brought increased segregation in the form of apartheid. Urban conditions for blacks improved little, rural conditions deteriorated, and although death rates declined due to chemotherapy and BCG vaccination, the numbers of uncured patients accumulated. Morbidity rates, measured in the 1960s by notification rates, declined, but the author attributes this change to decreased case-finding and relocation of millions of black South Africans to segregated national states, where cases went unrecorded. Medical services were relatively ineffective for two reasons: they were far inferior to those available to whites and they failed to address the socioeconomic causes of the disease.

With a wealth of detail, Packard indicts the policies of governments and other interest groups that perpetrated, tolerated, and ignored the conditions that led to this plague of tuberculosis. For this reviewer, at least, he illuminates many of the complexities of South African society, politics, and economics and thus adds substantially to what can be gleaned from the American media. His thesis, broadly stated, is probably correct: social injustice and economic exploitation do indeed contribute to disease, and narrowly targeted medical measures are relatively weak correctives.

As an epidemiological study, however, Packard's book is flawed. His statistical data on tuberculosis are unavoidably inaccurate and incomplete, as he recognizes. The factors that might contribute to tuberculosis are multiple; they shift over time and cannot be measured reliably. They cannot be correlated precisely with rates of death or sickness, and correlation cannot prove causation. The author struggles with these problems but with limited success. When he clearly identifies the uncertainties in his interpretations, his prose becomes tedious with words such as "probably," "evidently," "could be," and "may have" — signs of honest reporting but a weak argument. The political and moral conviction that drives the author's thesis, on the other hand, sometimes leads to frank speculation. In the absence of reliable morbidity data during the 1970s, for example, he is led "to suspect" that cuts in medical services caused an increase in tuberculosis (p. 301). And because of a drought and a recession, he observes on p. 304, "one can easily imagine" that the officially reported increase in tuberculin negativity among children was due to malnutrition rather than to decreased infection. Bias in the presentation of data is also suggested by Packard's reporting of mortality data. Although he does state (p. 276) that death rates dropped sharply in the early 1950s after the advent of chemotherapy, he reports no death rates after 1955. Instead, he shifts to morbidity data; they support his argument better.

In short, *White Plague, Black Labor* is a politically provocative book that deals with health care issues that are important to the United States as well as to South Africa. We would do well to pay attention to the author's observations and opinions. In trying to prove his thesis with necessarily inadequate data, however, Packard's reach exceeds his grasp. His understandable ambition to prove his political points with descriptions, numbers, and logic is not convincingly realized.

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A. McGEHEE HARVEY, GERT H. BRIEGER, SUSAN L. ABRAMS, and VICTOR A. McKUSICK. *A Model of Its Kind: A Centennial History of Medicine at Johns Hopkins,* 2 Vols. Baltimore: Johns Hopkins University Press, 1989. 576 pp. Price $50.00

Reviewed by STEWART G. WOLF, JR.

The Johns Hopkins Hospital and Medical School were founded in 1889 and 1893 respectively. Over a century after the birth of the United States, railroading, shipping, manufacturing, and commerce in general were burgeoning and beginning to compete successfully with those in the more developed countries of Europe that had spawned the new nation. The influence of America had begun to be felt in the arts and humanities, notably in the poetry of Walt Whitman and Longfellow, and the philosophy of William James, but Americans were still going to Europe for their graduate medical studies.

The foundation of the Johns Hopkins Hospital and Medical School signalled the beginning of the end of this intellectual dependence. The title of this centennial volume, *A Model of Its Kind: A Centennial History of Medicine at Johns Hopkins,* is particularly appropriate because in several important ways the Johns Hopkins was an innovative institution, setting standards for higher education in America that were quickly emulated at Harvard and other universities all over the country.

The first beginnings toward true graduate education in America were made by Clark University in Worcester, Massachusetts, and the Johns Hopkins University in Baltimore, Maryland. The importance of the Hopkins development was quickly recognized in Boston. President Charles Eliot of Harvard, who had recommended to the Hopkins' organizing trustees that no courses above undergraduate level be offered, declared in 1902 that the small graduate effort at Harvard ". . . did not thrive until the example of Johns Hopkins forced our faculty to put their strength into the development of our instruction for graduates."[1]

Johns Hopkins himself provided some of the most important ideas that guided the development of his university: that money be

1. John C. Schmidt, *Johns Hopkins: Portrait of a University* (Baltimore: The Johns Hopkins University, 1986), p. 1.

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spent on people in preference to buildings; and that the Johns Hopkins Hospital be created as part of a medical school fully integrated into the university, a highly original prescription for the time.

The collaborative history of the Johns Hopkins Medical Institutions written by A. McGehee Harvey, Gert H. Brieger, Susan L. Abrams, and Victor A. McKusick, is a model of cooperative authorship. The narrative is well-organized, well-documented, engagingly written, and genuinely stimulating. Volume I outlines the creation and expansion of the medical school and hospital throughout the century. Volume II contains a superb collection of photographs and memorabilia. The book blends chronicles of policies and innovations with short sketches of faculty leaders and other important figures who shaped and developed the hospital and medical school. By and large, these vignettes make fascinating reading. Although some of them are flat, factual, biographical notes that give no feel for the person or his/her relationship with the Hopkins; others, such as the biography of Arnold Rich, long-time professor and eventually chairman of the department of pathology, offer vivid portraits of the individuals who made the institution great.

Throughout the text are engaging anecdotes that add flavor and enjoyment to the book. The two-column description of the early use of sulfa drugs, for example, was introduced with an anecdote about the contrasting fates of the sons of two American presidents, Calvin Coolidge, Jr., and Franklin D. Roosevelt, Jr., both of whom at different times had developed septicemia: young Coolidge was stricken before sulfa drugs were introduced and died, while Roosevelt's son, who had access to the new antimicrobial agents, survived. Many of the interesting tales have been told before, but their re-telling is crisp and entertaining. One often finds stimulating and enlightening commentary, sometimes trenchant and even prescient, as the darker side of some otherwise beneficial developments, such as government funding and ultimate government control of the hospitals, are described.

As the book traces the changing pattern of activities and events, there is no gilding of the lily. Good times and bad are chronicled without apology. Judgments in the selection of leaders, some brilliant, others unfortunate, stand out clearly from the text with neither unnecessary encomium nor expression of regret. The authors' account of growth at Hopkins conveys a sense of normal human beings struggling with challenges, disappointments, and triumphs.

The epilogue is especially persuasive in arguing that Hopkins has indeed been a model of its kind.

A good many books have been written about the remarkable pioneering that went on at the Hopkins, but this one manages to achieve a freshness, especially in interpretation, that lends it a quality all its own. It is beautifully produced; the illustrations are well-selected and very clear. The sad part of the story is that the Johns Hopkins, once the innovator in medical education, has, with other great institutions, fallen victim to the pressures of accrediting authorities for a measure of uniformity. Also, in competition for research dollars, Hopkins has had to respond to the carrot and stick tactics the government uses in assigning its bountiful, but never sufficient, largesse. The strain is evident in the policy of the new chairman of the department of medicine, the eighth successor to William Osler, in which he subordinates clinical medicine to research. Splitting duties of his faculty, the chairman designates himself director for research and delegates clinical activities and teaching to an associate director.

All in all this book, a scholarly document and an easy reference source, makes agreeable nostalgic reading.

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New Books In the History of Medicine in the Historical Collections of the Library, July Through September 1990

JACK ECKERT

Archives of American Art, *Art-Related Archival Materials in the Philadelphia Region: 1984–1989 Survey* (Washington: Offices of the Archives of American Art, Smithsonian Institution, 1990).

Carolyn Atkins and Betty A. Isbister, editors, *Where the Cranes Fly: the Adventures of Edith F. Millican, M.D., in China, 1943–1948: A Medical Adventure under the Presbyterian Church in War-Torn China* (Albuquerque, NM: Albuquerque Printing Company, 1987).

S. Robert Hilfer, *The Emergence of Experimental Embryology in the United States* (Bethesda, MD: National Library of Medicine, 1990).

Adam Phillips, *Winnicott* (Cambridge: Harvard University Press, 1988).

Robert Proctor, *Racial Hygiene: Medicine under the Nazis* (Cambridge: Harvard University Press, 1988).

Joseph B. Vander Veer, *History of the Pennsylvania Hospital Unit in World War II (Evacuation Hospital #52, Station Hospital #364)* (Bryn Mawr, PA: Dorrance and Company, 1989).

Leonard G. Wilson, *Medical Revolution in Minnesota: A History of the University of Minnesota Medical School* (St. Paul: Midewiwin Press, 1989).

Theodore E. Woodward, *The Armed Forces Epidemiological Board: Its First Fifty Years* (Falls Church, VA: Office of the Surgeon General, Department of the Army, 1990).

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Memoir of Louis Tuft, 1898–1989

HENRY J. TUMEN

Dr. Louis Tuft, a Fellow of the College of Physicians of Philadelphia, died 19 December 1989 at the age of ninety-one. Dr. Tuft was an allergist who was widely known both in this country and abroad for his important studies of the causes, pathogenetic mechanisms, clinical aspects, and treatment of asthma and of other immunologically related disorders. His competence and great skill as a clinician, a teacher, and an investigator were widely recognized. His contributions to the literature of his specialty were extensive and of great influence. In addition to his active schedule of clinical and laboratory research, Dr. Tuft accepted many administrative and educational responsibilities and was a dedicated contributor to the community-at-large. He recognized the social obligations of the medical profession and gave generously of his time, strength, skills, and possessions to support the broad community efforts of the College of Physicians and of the other medical societies of which he was a member.

Dr. Tuft was a native of South Philadelphia. His scholastic record was excellent, but it was largely his good fortune in being selected to receive a "Mayor's Scholarship" that made it possible for him to enter the University of Pennsylvania School of Medicine. He graduated eighth in the class of 1920, and went on to a one-year internship. Thereafter, he learned that there was an opening for an attending physician at a rural "Home and Hospital" outside Pittsburgh, called Mayview. There was no real evidence that Dr. Tuft would qualify for the position of attending physician, but the position carried a substantial salary for those years — $1,900 annually. Dr. Tuft took the chance, applied, and was accepted. He was eager to work at Mayview, not only because of the income but also because he felt that it would give him access to unusual medical experiences.

Dr. Tuft retained rather vivid memories of the early years of his medical career. He conveyed these in an article published in the

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journal of the Philadelphia County Medical Society.[1] It described the poor quality of the educational training programs for interns and residents in the 1920s, and also recounted the efforts made by Dr. Tuft in his education to compensate for these deficiencies.

In his autobiographical article, Dr. Tuft described Mayview as an institution that cared for 2,500 patients. Two thousand of these were insane and five hundred were classified as "medical," including those with tuberculosis. As was true of the hospital at which he had been an intern, Mayview was also an institution in which no semblance of an organized educational program was provided. He spent the major portion of his stay at Mayview on the medical wards. He could occasionally seek the help of the director, but Dr. Tuft said that it was rather rare to obtain any assistance since the director was usually more concerned with problems of the psychiatric patients.

Dr. Tuft did benefit, however, from seeing patients with many conditions and diseases, even though this experience was not obtained under much supervision or guidance. An example is provided by changes in the treatment of patients with tuberculosis. In the 1920s the treatment of that disease consisted mostly of rest and fresh air, but pneumothorax had been recently introduced in the care of patients with some forms of pulmonary tuberculosis. To learn how to carry out this procedure, he went to a tuberculosis hospital in Pittsburgh to watch the application of the technique. Subsequently he had a crude machine built and started using pneumothorax in treating several patients at Mayview.

Dr. Tuft also acquired skill in the techniques of many different medical specialties and found himself doing cystoscopic examinations (without any special previous training), gynecological examinations, proctoscopies, ear, nose, and throat examinations, and "any treatment short of major surgery." In addition, because patients at Mayview who required major surgery had to be sent to another hospital, Dr. Tuft learned much by following the course of these patients and by consultation with specialists. Through this aspect of his training he developed a life-long interest in pathology and research.

Like his internship, therefore, his residency was one in which there was no organized supervision of Dr. Tuft's training and educa-

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1. Louis Tuft, "Practice in Earlier Years — Personal Observations," *Philadelphia Medicine,* March 1990, 96.

tion. It was a period in which he had the opportunity to learn by practice and to gain substantial confidence in what he was doing. His Mayview years were also productive in providing Dr. Tuft with the funds needed to open an office and begin his own practice. He returned to the house in Southwest Philadelphia occupied by his mother and brother, and decided to practice from there.

In his comments on this period in his life Dr. Tuft emphasizes what he regarded as the difficulties of general practice in the 1920s and 1930s, the "depression years." Dr. Tuft speaks of the problems of attracting patients when they were already satisfied with their older physicians, of the very low fees he received for his services, of what he considered as unreasonable requests by patients, and of the conflicts that he had with a few patients because of differences between his mores and theirs. His own practice gradually increased, however, as he attained recognition as a specialist in asthma and allergy and, in time, he was able to charge somewhat higher fees. After having been in general practice for four years, he was able to open an office in the center of the city, on Pine Street, that he shared with three or four other physicians.

The tribulations, annoyances, and dissatisfactions of the life of a general practitioner, however, were far outweighed for Dr. Tuft by the great advantages of being back in Philadelphia with all the medical and scientific activities that were to be found in the city. Great opportunities were open to young physicians who were eager to learn about recent progress.

Upon his return from Pittsburgh, Dr. Tuft began working as a volunteer in the laboratory of Mt. Sinai Hospital. He did this without pay, as did many other young physicians, and gave a great deal of time to the laboratory. This was not entirely altruistic. Dr. Tuft believed that a sound knowledge of pathology was necessary if he wished to become a competent internist, and the laboratory was the best place in which to seek the experience he desired. Working in the laboratory also gave him the chance to make new friendships among the other young physicians who were eager to keep abreast of the many advances of the day, and to learn what was going on medically in Philadelphia. With them he attended many of the meetings and conferences held at the College of Physicians, the Philadelphia County Medical Society, and the staffs of the hospitals throughout the city and then spent time discussing and reviewing all that had been presented. All of this was stimulating and played an important part in Dr. Tuft's professional development. Now his

thirst for knowledge and his eagerness for growth could at last be satisfied.

Dr. Tuft gradually increased his activities as his horizon expanded. His earlier laboratory experience led to his being offered appointments as part-time director of the laboratories of some of Philadelphia's smaller hospitals, such as Howard and Northwestern General. He also received a Fellowship at the Research Institute of Cutaneous Diseases that was directed by Dr. John Kolmer. In addition, Dr. Truman Schnabel invited Dr. Tuft to serve as an instructor in the Outpatient Medical Clinic at the University of Pennsylvania. He taught there until 1931, when he was invited to join the faculty of the medical school at Temple University.

It was at Temple that his studies of allergy and asthma intensified. He became director of the Allergy Clinic and chief of the Allergy Department and gradually rose through the faculty ranks to become professor of medicine and, eventually, emeritus professor when he was sixty-five. His clinical and laboratory efforts were constantly directed to clinical and basic investigation. He wrote many reports of his studies and during his career published approximately 130 scientific papers and five text books. In 1941 Dr. Tuft became president of the Society for the Study of Asthma and Allied Conditions, which later merged with the American Association for the Study of Allergy to form the American Academy of Allergy.

During his years of practice Dr. Tuft made numerous friends. He was eager to meet and learn from colleagues of an older generation, whose skills and devotion to clinical practice he greatly admired. One of these was Dr. Jacob L. Manases, who became Dr. Tuft's model as an ideal practitioner. In 1939 Dr. Tuft married Dr. Manases's daughter Carlyn, a well known psychologist, who died 10 years ago. They had a son and two daughters who survived Dr. Tuft, as do two grandchildren and a great grandchild.

Dr. Tuft's concern for the community-at-large and his support of community projects was recognized by his many friends who, on the occasion of his 90th birthday, launched a campaign for a scholarship fund that Dr. Tuft requested be designated to assist Temple University medical students. He remained ever cognizant of his good fortune in receiving the Mayor's Scholarship that had made it possible for him to attend medical school and he hoped that other young people aspiring to medicine would be similarly assisted.

Dr. Tuft was also a life-long supporter of and fund raiser for the Aid Association of the Philadelphia County Medical Society — a

fund developed for the families of physicians who had died without leaving estates sufficient for the support of their widows and dependent children. He believed that more fortunate physicians should come to the aid of those who needed assistance.

Even after Dr. Tuft had ceased his service at the hospital and the medical school of Temple University, he continued his active practice at his center city office. He saw patients almost daily and, in fact, was in his office up to the day of his death. He also maintained his interest in golf, and at least three times each week played nine holes at Philmont Country Club. His last writing effort was a book that described his experiences as a golfer.[2] It gave descriptions of the difficulties of the various courses on which he had played all over the world, and the special efforts that a golfer had to make in order to attain a satisfactory score at each of them. Fortunately, the book was published not long before his death, so he was able to see it and touch it and relive some of the experiences that he described. The book was a happy way for Dr. Tuft to say farewell to an activity that had brought him great pleasure and contentment.

Dr. Tuft was a fine man — strong, durable, of the highest ethical standards, and great intelligence and ability. He made major contributions to the science and practice of medicine, particularly in allergy, that area of medicine in which he was an outstanding expert. He was an impressive teacher, a good friend and companion. His colleagues learned from him constantly. He was loved and appreciated by all who knew him. His legacy is to be found in his many contributions to medical literature and in the loving memories of his children — and their children — and in the lasting remembrances of all of us who knew him and became his friends.

Graduate Hospital
19th and Lombard Sts.
Philadelphia, PA 19146

2. Louis Tuft, *Touring the World via Golf Courses* (New York: Vantage Press, 1989).

Memoir of Albert F. Cleveland, 1907–1989

GEORGE L. SPAETH

Dr. Albert F. Cleveland, who died on 5 May 1989, at the age of 82, kept life in proper perspective, balancing well the demands placed on him. The field of medicine, like the greater world of which it is a microcosm, has become increasingly specialized and insular. In such a fragmented society, Al was a welcome, refreshing model of balance and coherence.

Al Cleveland was born in 1907 in Bradford, Pennsylvania, in the northwest corner of the state. He graduated from the Bradford High School in 1926 to work at the Bradford Pharmacy, with the thought of attending pharmacy school in Philadelphia at a later date. His dentist encouraged him to go to the Ferris Junior College, so that Cleveland would get the credits necessary to be admitted to college, which he indeed was at the University of Michigan. After graduating from Michigan in 1928, Al went on to the University of Pittsburgh for his medical training. While a senior at Pitt, he lived and worked at the Rosalia Foundling Home. Al graduated from the University of Pittsburgh School of Medicine in 1936. An internship at Mercy Hospital in Pittsburgh, and a residency there in pathology and bacteriology, provided more than a firm medical base for his future career. It was at this time that he met Cecilia Ramsey, who later was to grace his life as his wife.

In 1938 Al became a general practitioner in Brockway, also in the northwest part of Pennsylvania, where his thoughtfulness, thoroughness, eagerness, and good humor must have had a positive impact on the town's six thousand inhabitants. Seven years later, Al enrolled in the Graduate School of the University of Pennsylvania to learn ophthalmology. He became a resident at the Wills Eye Hospital, and remained in the Philadelphia area for the rest of his life. He joined Dr. Patrick Kennedy, a revered chief at Wills, in his Upper Darby private practice until establishing his own practice in 1949. Al retired from this practice in 1986.

During his professional career, Al was on staff at Delaware County Memorial Hospital; Fitzgerald Mercy Hospital, where he was chief of ophthalmic services; Wills Eye Hospital, where he

Transactions & Studies of the College of Physicians of Philadelphia Ser. 5, Vol. 12, No. 4 (1990); 519-520
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was chief attending surgeon and staff president; and the Graduate School of Medicine at the University of Pennsylvania.

Al was also active in numerous professional organizations. During his career he was a member of the Delaware County Medical Society, the American Medical Association, the Ophthalmic Club of Philadelphia, the American Academy of Ophthalmology, the Governor's Traffic Safety Council of Pennsylvania, and the College of Physicians of Philadelphia, to which he was elected a Fellow in 1963. In addition, Al served as treasurer of the Pennsylvania Academy of Ophthalmology & Otolaryngology, and as chairman of the Wills Eye Conference Committee in 1967, 1968, and 1969, receiving the group's Silver Tray award in 1972.

Despite his many professional activities, Al was a marvelous father, husband, and grandfather, as well as an avid hunter, fisherman, and golfer. He is survived by his wife; sons, John G. and Dr. William A.; daughter, Anne Court; four grandchildren, and two sisters.

Albert F. Cleveland was a lovely person and a fine physician who contributed to the many communities in which he lived: to his family, to his practice, to his friends, and to his profession.

Wills Eye Hospital
Ninth & Walnut Streets
Philadelphia, PA 19107–5599

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Transactions & Studies of the College of Physicians of Philadelphia (ISSN 0010-1087) is published four times a year (March, June, September, December) by the College of Physicians of Philadelphia, 19 South 22nd Street, Philadelphia, PA 19103. Second-class postage paid at Philadelphia, PA 19104. POSTMASTER: Send address changes to *Transactions & Studies of the College of Physicians of Philadelphia,* 19 South 22nd Street, Philadelphia, PA 19103.

Subscription correspondence should be sent to the journal at the same address. Subscriptions, U.S.A. and Canada $35.00, foreign $40.00. Single copies, $10.00.

Transactions & Studies of the College of Physicians of Philadelphia is indexed in *Biological Abstracts, Chemical Abstracts,* and *Index Medicus.*

TRANSACTIONS & STUDIES
OF THE
COLLEGE OF PHYSICIANS OF PHILADELPHIA
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